OBG

REPORT

Facility Soil Vapor Summary Report

GE Aviation
Evendale, Ohio

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Evendale, Ohio

Prepared for:
GE Aviation

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1. INTRODUCTION

O'Brien & Gere (OBG) was retained by the General Electric Company (GE) to perform an assessment of the soil vapor pathway at the GE Aviation facility (Facility) located in Evendale, Hamilton County, Ohio (Figure 1). Prior to beginning the assessment, a Work Plan was prepared to address USEPA's comments on the Corrective Measures Study (CMS) Interim Report for soil vapor (OBG, 2015). The assessment activities discussed herein were conducted in accordance with the Work Plan.

1.1 SITE LOCATION

The GE Aviation facility is located on an approximately 400-acre site in southwestern Ohio, approximately ten miles north of Cincinnati. The Facility is a secure, highly active, long-term manufacturing facility located within the heavily industrialized I-75 corridor between Cincinnati and Evendale, Ohio. The Facility has been used for military and commercial aircraft engine manufacturing since the 1940s.

1.2 SITE BACKGROUND

Beginning in late 2006, GE conducted vapor monitoring activities at the Facility, primarily in the southern portion of the Facility formerly operated by the US Air Force and referenced as Former AFP 36 (OBG, 2007). As part of the first round of sampling in 2006, limited sub-slab and indoor air samples were collected within Buildings 700 and 800 (sub-slab and indoor air) and Buildings 500, 703, B and C (indoor air only). A summary of the soil vapor assessment activities and results was provided within the 2015 CMS Interim Report for the soil vapor pathway. Regarding the offsite vapor pathway, USEPA provided feedback, via an e-mail from Mr. Todd Gmitro, dated July 30, 2015, that indicated the offsite soil vapor pathway was incomplete and no further evaluation offsite was necessary beyond the southern property line. Regarding the onsite vapor pathway, however, USEPA requested further evaluation.

At the time of the 2006 sampling, each of the buildings identified above was occupied by plant employees for 8-hour work shifts and contained active manufacturing operations. Buildings B and C were demolished in late 2015 and early 2016 as part of a site-wide campus renovation program. Indoor air samples collected in 2006 did not reveal CVOCs, primarily trichloroethene (TCE) and tetrachloroethene (PCE), above applicable indoor air screening levels. The screening levels were re-evaluated as part of the 2015 Interim Report using updated VI guidance and attenuation factors from USEPA (USEPA, 2012) and the result of the evaluation indicated that TCE and PCE in indoor air samples were below screening values. Based upon USEPA comments on the 2015 Soil Vapor Interim Report, screening levels for TCE and PCE in soil vapor and indoor air were lowered to reflect a target hazard quotient of 1, as shown in the table below. Recommended screening levels for industrial land use were modified to the following:

Industrial Soil Vapor Screening Levels ($\mu g/m^3$)	
Parameter	
Tetrachloroethene (PCE)	5,600
Trichloroethene (TCE)	280
Industrial Indoor Air Screening Levels ($\mu g/m^3$)	
Parameter	
Tetrachloroethene (PCE)	168
Trichloroethene (TCE)	8.4

1.3 TECHNICAL APPROACH

Based on the site-specific building information presented within the Work Plan, GE sampled sub-slab soil vapor and indoor air at Building 800 to quantitatively evaluate the soil vapor pathway. As explained in the Work Plan,

Building 800 was selected for sampling because it represents the largest subgrade structure at the Facility, by square footage, and is the building located nearest the highest groundwater concentrations of chlorinated volatile organic compounds (CVOCs) at the Facility.

The active groundwater pump and treat system and its associated extraction wells are located closest to Building 800. In addition, recent data from groundwater monitoring wells both to the north and south of Building 800 suggest that CVOCs may be located within groundwater beneath the footprint of the building. By evaluating the basement area, which is closest to groundwater, the Building 800 basement represents the "worst-case" scenario for the soil vapor pathway. Moreover, based on differential pressures and air flow demonstrations, each of which was documented in the Work Plan, the basement portion of the building is negatively pressured with respect to both ambient outdoor air, as well as relative to the first floor.

The details regarding the assessment activities for Building 800 are discussed below.

1.4 OBJECTIVES

The sampling objective was to evaluate CVOCs in soil gas and indoor air at Building 800, based on the factors discussed in the approved Work Plan.

2. SAMPLING ACTIVITIES

OBG, on behalf of GE Aviation, collected sub-slab vapor and indoor air samples from the basement of Building 800 between March 21 and 23, 2016 and between October 10 and 12, 2016. The details regarding the completed assessment activities for Building 800 are discussed below in the following subsections.

2.1 ASSESSMENT TASKS

2.1.1 Site Reconnaissance and Utility Clearance

Prior to sample collection, OBG and GE Aviation personnel performed a reconnaissance to establish representative sampling locations. Each location was evaluated for safety and security, in order to minimize the impact on production operations and to confirm that the sampling equipment would not be disturbed. Signage was also hung near each sampling location indicating that environmental sampling was occurring. Each location was cleared by GE Aviation. Approved locations are shown on Figure 2.

OBG then contracted The Underground Detective (TUD) to perform a concrete scan of the proposed sampling locations. TUD was able to identify steel re-bar within the concrete and observe for utility corridors that may have been installed within the concrete. The scanner also had the capability to see several inches below the base of the concrete for potential subgrade utilities. During the scanning activities, which occurred on March 17, 2016, there were no utilities observed within or immediately below the concrete requiring movement of the sampling probe. According to the scanning device, approximate concrete thicknesses for the sampling locations ranged from 6 to 10 inches. Concrete thickness was confirmed during the installation of the sub-slab soil vapor point installation activities discussed in Section 2.1.2 below.

During the second round of sampling, only a site reconnaissance was performed, to ensure that previous sampling locations could be found and that equipment or storage of items was not going to hinder sampling activities. Utility clearance was not performed, based on the lack of construction activities within the building since the last event.

2.1.2 Sub-Slab Soil Vapor Point Installation

On March 21, 2016, OBG personnel revisited each sampling location to install the sub-slab sampling points. When installing the points, a hammer drill equipped with a 3/8-inch diameter drill bit was advanced through the slab and into the subbase/soil material beneath the slab. Slab thicknesses were documented on field forms. Once the drilling was completed, the concrete dust was swept up and the hole cleaned with a dry brush. ¼-inch outside diameter (O.D.) Teflon®-lined tubing was then placed into the hole such that the tubing extended below the base of the concrete slab. Non-VOC permagum material was then placed around the tubing and slightly into the annular space between the tubing and drill hole to provide a seal. The end of the tubing was capped with permagum and a cone placed over the sampling point in preparation for sampling. Signage was hung on the wall adjacent to the sampling point and on the cone. These same procedures were followed during the second event on October 10, 2016, with the tubing placed through the previously installed drill hole.

2.1.3 Sub-Slab Soil Vapor Point Sample Collection

Following a 2-day period to allow for the sub-slab soil vapor sampling point installation to equilibrate, OBG remobilized to the Building 800 basement sampling locations on March 23, 2016, as shown on Figure 2. At each location, a shroud was placed over the tubing and sampling point and helium introduced into the shroud via separate tubing. Concurrent with the introduction of helium to the shroud, the sampling tubing was connected to a manual pump with a Tedlar® bag attached to the end of the tubing. Once the helium had been introduced to the shroud, a battery-operated drill was used to turn the pump and draw sub-slab vapors into the Tedlar® bag. Once the Tedlar® bag had been filled, the tubing was disconnected from the pump and briefly connected to a photoionization detector (PID) used to measure the level of total VOCs within the sampling tubing. The tubing was then capped and the Tedlar® bag monitored with a helium detector. This same process was repeated for each of the seven sampling locations, with PID concentrations and helium concentrations recorded on field

sampling forms, which have been included as Appendix A. It should be noted that according to typical sampling guidance, concentrations of less than 5%, by volume, of helium (50,000 ppm) are considered representative of a good seal. A summary of pre-sampling conditions at each location during the March 2016 event is provided in the table below:

Sub-Slab Sampling Location	Helium Concentration in Grab Sample (ppm)	Sub-Slab PID Measurement (ppb)	Indoor Air PID Measurement (ppb)
800-1	0.0	598	0.0
800-2	0.0	224	0.0
800-3	1,000	792	0.0
800-4	0.0	696	0.0
800-5	0.0	596	0.0
800-6	0.0	354	0.0
800-7	0.0	0.0	0.0

Once the sampling point and tubing were demonstrated to be sealed, the tubing was connected to a laboratory-supplied, batch-certified 6-liter Summa® canister using a new, brass compression fitting. Prior to the connection, each of the canisters was checked for vacuum pressure with a digital manometer and the pressures recorded on the sampling forms, chain of custody and on the canister labeling. The shrouds were left in place during sampling so as not to inadvertently disturb or affect the seal. Following successful connection to the Summa® canister, the regulator, which was laboratory calibrated to sample for approximately 8 hours, was opened, with the time of sample commencement recorded on the sampling form, chain of custody and canister labeling. Throughout the 8-hour sampling window, the analog vacuum gauge on the regulator was monitored every 1-2 hours to check vacuum levels and demonstrate that sub-slab soil vapor was continuing to be introduced into the canister for analysis. Photographs taken during sampling activities have been included in Appendix B.

Following the full 8-hour period, or at a time when a vacuum of between -5 and -7 millimeters of mercury (mm Hg) remained on the analog gauge, each canister was closed, completing the sub-slab soil vapor sampling process. Initial and final pressures for the canisters are included on both the sampling forms as well as on the laboratory chain of custody forms. During the March 2016 event, each sample was collected over a period ranging from 7-8 hours, with no apparent issues noted regarding the regulators or canisters.

Once the canister had been closed and disconnected from the tubing, the tubing and shroud were removed from each sampling point and the hole backfilled with quick-drying hydraulic cement. Cones were left at each location so as to allow for the concrete to cure. GE Aviation security was notified of the completion of sampling and that the cones could be safely removed.

These same procedures were followed during the October 2016 event, with sampling activities occurring on October 12, 2016, two days following the installation of the sampling points. Each sample was collected over a period ranging from 7-8 hours, with the exception of sub-slab sampling location 800-5-SS, which was sampled over a 6 hour period, presumably due to a poorly calibrated flow controller. A summary of pre-sampling conditions at each location during the October 2016 event is provided in the table below:

Sub-Slab Sampling Location	Helium Concentration in Grab Sample (ppm)	Sub-Slab PID Measurement (ppb)	Indoor Air PID Measurement (ppb)
800-1	0.0	2,223	0.0
800-2	0.0	0	0.0
800-3	186	1,756	182
800-4	0.0	71	53
800-5	0.0	1,012	98

Sub-Slab Sampling Location	Helium Concentration in Grab Sample (ppm)	Sub-Slab PID Measurement (ppb)	Indoor Air PID Measurement (ppb)
800-6	100	145	175
800-7	0.0	22	0.0

2.1.4 Indoor Air Sample Collection

Concurrent with the sub-slab sampling, co-located indoor air samples were also collected at the locations noted on Figure 2. As part of the indoor air sample collection, laboratory-supplied, individually-certified 6-liter Summa™ canisters were placed proximate to the sub-slab sampling locations. The canisters were equipped with 8-hour sampling regulators, similar to the sub-slab canisters. The canisters were gauged for vacuum pressures using a digital manometer and recorded prior to opening the canister. Consistent with USEPA sampling guidance, the canisters were set on buckets, chairs or other nearby stored items such that the air intake was located within the "breathing zone," between 3 and 5 feet above the slab. Similar to the sub-slab sampling activities identified above, vacuum pressures were checked every 1-2 hours throughout the sampling process.

Following the full 8-hour period, or at a time when between -5 and -7 millimeters of mercury (mm Hg) remained on the analog gauge, each canister was closed, completing the indoor air sampling process. Initial and final pressures for the canisters are included on both the sampling forms as well as on the laboratory chain of custody forms. During the March 2016 event, each sample was collected over a period ranging from 7-8 hours and corresponded with the co-located sub-slab samples (*i.e.*, the sub-slab and indoor air canisters were started and stopped at approximately the same time), with the exception of indoor air location 800-1, which was sampled for approximately four hours, presumably due to a poorly calibrated flow controller.

During the October 2016 event, each sample was collected over a period ranging from 7-8 hours and corresponded with the co-located sub-slab samples with no apparent issues noted with the regulators or canisters, with the exception of indoor air sampling location 800-6-IA, which was sampled over a 5 hour, 48 minute period, presumably due to a poorly calibrated flow controller.

In addition, as part of the indoor air sampling process in both March and October 2016, OBG generated a chemical inventory list of items that were present in the vicinity of the sampling locations. Based on the inventory, five of the seven locations did not contain chemical storage within close proximity to the sampling locations. At sampling location 800-3, a spray bottle of disinfectant cleaner was observed during both events. At sampling location 800-5, fork truck batteries and a hydraulic motor, labeled as containing UCON Hydrolube 732, were both observed within close proximity to the sampling location during both events. However, these items were not anticipated to affect indoor air quality results, and therefore, were not moved. The chemical inventory forms, along with the indoor air sample collection forms, are located in Appendix A.

2.1.5 Outdoor (Ambient) Air Sample Collection

Outdoor ambient air samples were also collected as part of the assessment process at locations denoted on Figure 2. The outdoor samples were collected to serve as ambient, background data to identify if outdoor air was affecting indoor air quality. Laboratory-supplied, individually-certified 6-liter Summa™ canisters were placed on the north and south sides of the building, based on prevailing wind directions noted on the day of sampling, which were out of the southwest during both the March and October 2016 sampling events. The canisters were equipped with 8-hour sampling regulators, similar to the sub-slab and indoor air canisters. The canisters were gauged for vacuum pressures using a digital manometer and recorded prior to opening the canisters. The canisters were set either on a bucket, or in the case of the northern sample (800-AA-2), set on an elevated curb. Vacuum pressures were checked throughout the sampling process. The canister was equipped with a funnel and clean tubing to prevent moisture from inadvertently entering the canister, although no precipitation was noted during both sampling events. During both events, samples were collected over a 7-8 hour period, consistent with sub-slab and indoor air methodology. Field forms associated with the outdoor air sample collection are located in Appendix A.

2.2 LABORATORY ANALYSIS AND DATA QA/QC

Sampling canisters and regulators were shipped under chain of custody to Eurofins Lancaster Laboratories Environmental (ELLE) in Lancaster, Pennsylvania following both sampling events. Samples were analyzed for the CVOC list specified below by USEPA Method TO-15.

The CVOC analytes included the following compounds:

- TCE
- PCE
- Carbon tetrachloride
- Chloroethane
- 1,1-Dichloroethane
- 1,2-Dichloroethane
- 1,1-Dichloroethene
- *cis*-1,2- Dichloroethene
- *trans*-1,2- Dichloroethene
- 1,1,1-Trichloroethane
- Vinyl chloride

As mentioned previously, canisters that were used to analyze the indoor and outdoor air samples were individually certified by the laboratory. Canisters that were used to collect sub-slab soil vapor samples were batch-certified by the laboratory, which requires that a certain percentage of the canisters, selected at random, go through the certification process. As shown on the data presented in Section 3.0, the laboratory reporting limits for the compounds from batch-certified canisters are higher than the individually-certified canisters. It should be noted that the reporting limits of the batch-certified canisters still meet applicable screening levels for sub-slab soil vapor.

3. RESULTS

3.1 DATA EVALUATION AND SCREENING

Data from the March and October 2016 events are presented in Table 1. OBG evaluated the data and compared them to established USEPA VI screening levels for the industrial land use pathway. The screening levels for TCE and PCE were previously established within the 2015 Interim CMS Report for soil vapor. However, upon review of the 2015 Interim Report for soil vapor, USEPA requested modified industrial screening levels that are based on a target hazard quotient of 1. The new screening levels identified specifically for sub-slab and indoor air for TCE and PCE were established in Section 1.2 and are provided in Table 1. Laboratory analytical results for both events are provided in Appendix C.

3.1.1 Sub-Slab Soil Vapor Data

During the March 2016 event, concentrations of TCE were greater than the soil vapor screening level of 280 micrograms per cubic meter (µg/m^3) at each of the seven locations, ranging from a low of 1,700 µg/m^3 at location 800-7 to a high of 35,000 µg/m^3 at location 800-1. Levels of PCE were less than the soil vapor screening level. It should be noted that although screening levels were not generated for the remaining CVOC constituents, concentrations of these other constituents do not approach anticipated screening levels. For example, 1,1,1-trichloroethane has an indoor air screening level of 220,000 µg/m^3, which corresponds to a soil vapor screening level of 7,333,333 µg/m^3.

During the October 2016 event, concentrations of TCE were again greater than the soil vapor screening level of 280 µg/m^3 at each of the seven locations, consistent with results from March 2016. The concentrations ranged from a low of 1,600 µg/m^3 at location 800-7 to a high of 39,000 µg/m^3 at location 800-1. Also similar to March 2016, levels of PCE were again less than the established soil vapor screening level. Detections of other CVOC constituents were consistent between the March and October sampling events.

3.1.2 Indoor Air Data

During the March 2016 event, each indoor air analytical result was less than the approved screening levels. TCE was detected in each of the indoor air samples, ranging from a low of 0.463 µg/m^3 at location 800-2 to a high of 1.39 µg/m^3 at location 800-1, below the screening level of 8.4 µg/m^3. PCE was also detected at each of the sampling locations, ranging from a low of 0.383 µg/m^3 at location 800-4 to a high of 0.665 µg/m^3 at location 800-5, below the screening level of 168 µg/m^3.

During the October 2016 event, indoor air analytical results were less than the established screening levels, consistent with the March 2016 event. TCE was detected in each of the indoor air samples, ranging from a low of 0.935 µg/m^3 at location 800-2 to a high of 2.86 µg/m^3 at location 800-6, below the screening level of 8.4 µg/m^3. PCE was also detected at each of the sampling locations, ranging from a low of 0.307 µg/m^3 (estimated 'J' flagged value) at location 800-5 to a high of 0.755 µg/m^3 at location 800-6, below the screening level of 168 µg/m^3.

3.1.3 Outdoor Air Data

During the March and October 2016 events, both TCE and PCE were detected in both ambient outdoor air samples, along with several other CVOCs, none of which approached the screening levels. The concentrations of TCE and PCE in the ambient outdoor air samples were similar to those observed in indoor air locations. Concentrations of TCE at the two outdoor locations measured 0.736 µg/m^3 and 0.407 µg/m^3 at locations 800-AA-1 and 800-AA-2, respectively, during the March 2016 event and 0.49 µg/m^3 and 0.468 µg/m^3 during the October 2016 event. Each of these values is within the range of TCE values found within the indoor air samples during both the March and October 2016 sampling events (ranged from 0.463 µg/m^3 to 2.86 µg/m^3). Similarly, concentrations of PCE at the two outdoor locations measured 0.651 µg/m^3 and 0.383 µg/m^3 at locations 800-AA-1 and 800-AA-2, respectively, during the March 2016 event and 0.289 µg/m3 and 0.299 µg/m3 (both estimated 'J' values) during the October 2016 event. These values are within the range of PCE values found within the indoor air samples during both events (ranged from 0.307 µg/m^3 to 0.755 µg/m^3).

4. DISCUSSION

Sub-slab soil vapor concentrations were detected above established soil vapor screening levels during both the March 2016 and October 2016 sampling events. Concentrations of CVOCs at specific sub-slab and indoor air sampling locations did not appear to differ appreciably between the two events. Additionally, corresponding indoor air concentrations were less than the established indoor air screening levels, indicating, based on these seasonally different events (which occurred during high and low groundwater conditions), that there are no appreciable levels of VI occurring and the existing concrete slab is serving to attenuate underlying soil vapor. The outdoor ambient sampling results suggest that indoor air concentrations of TCE and PCE are likely impacted by ambient air concentrations and that VI, although it has the potential to exist, is not occurring at an appreciable rate.

OBG recommends that continued monitoring be conducted during 2017 for the VI pathway in the form of two additional indoor air sampling events within Building 800 to demonstrate compliance with approved screening levels. Based on the evaluation that Building 800 was the most susceptible and likely building to experience VI-related issues, no further assessment of the VI pathway in Buildings 500, 700 or 703 is recommended.

5. REFERENCES

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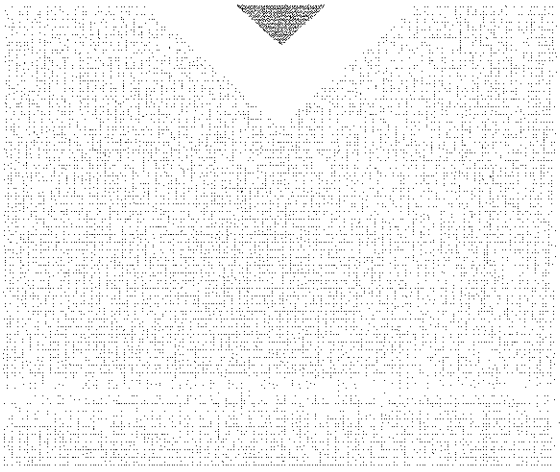
U.S. Environmental Protection Agency, 2012. *Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings.* EPA 530-R-10-002. March 2012.



Tables

Table 1
Sub-slab and Indoor Air Data - Building 800
Summary Data - March 2016 and October 2016 Sampling Events (µg/m³)

Sampling Location	Sample ID	Sample Type	Sample Date	1,1,1-Trichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Carbon Tetrachloride	Chloroethane	cis-1,3-Dichloropropene	Freon 11	Freon 12 & 114	Tetrachloroethene	Trichloroethene
800-1	62577-800-1-SS	Sub-Slab	3/23/2016	31,000	810 J	1,400	<160	<250	<110	<160	290 J	<160	35,000	<100
	62577-800-1-IA	Indoor Air		2.34	0.238	0.313	0.329	0.941	<0.0528	0.246	0.482	0.38	1.39	<0.0511
	62577-800-1-SS	Sub-Slab	10/12/2016	41,000	1,400	2,600	<16	<25	<11	140	580	50 J	39,000	<10
	62577-800-1-IA	Indoor Air		1.88	0.245	0.346	<0.0809	0.937	<0.0528	0.268	0.365	1.73	1.29	<0.0511
800-2	62577-800-2-SS	Sub-Slab	3/23/2016	6,300	<81	<79	<81	<130	<53	<79	<140	<79	6,900	<51
	62577-800-2-IA	Indoor Air		0.843	0.0971 J	0.104 J	0.247	0.847	<0.0528	<0.0793	0.54	0.0980 J	0.463	<0.0511
	62577-800-2-SS	Sub-Slab	10/12/2016	8,600	<16	24 J	<16	<25	<11	<16	210	<16	2,400	<10
	62577-800-2-IA	Indoor Air		1.56	0.153 J	0.160 J	<0.0809	1.39	<0.0528	0.159 J	0.335 J	4	0.935	<0.0511
800-3	62577-800-3-SS	Sub-Slab	3/23/2016	12,000	<81	<79	<81	<130	<53	<79	800	<79	13,000	<51
	62577-800-3-IA	Indoor Air		2.32	0.207	0.22	0.298	0.799	<0.0528	<0.0793	0.565	2.44	1.34	<0.0511
	62577-800-3-SS	Sub-Slab	10/12/2016	15,000	40 J	<16	<16	<25	<11	<16	1,800	<16	14,000	<10
	62577-800-3-IA	Indoor Air		3.17	0.490	0.806	<0.0809	0.658	<0.0528	0.361	0.389	0.728	2.5	<0.0511
800-4	62577-800-4-SS	Sub-Slab	3/23/2016	9,100	<81	<79	<81	<130	<53	<79	1,300	<79	4,200	<51
	62577-800-4-IA	Indoor Air		1.74	0.143 J	0.208	0.194 J	0.791	<0.0528	1.04	0.383	0.703	1.05	<0.0511
	62577-800-4-SS	Sub-Slab	10/12/2016	11,000	29 J	<16	<16	<25	<11	<16	2,400	<16	5,200	<10
	62577-800-4-IA	Indoor Air		1.89	0.193 J	0.272	<0.0809	0.746	<0.0528	0.275	0.372	1.53	1.13	<0.0511
800-5	62577-800-5-SS	Sub-Slab	3/23/2016	12,000	300 J	<79	<81	<130	<53	<79	140 J	<79	11,000	<51
	62577-800-5-IA	Indoor Air		1.69	0.194 J	0.233	0.347	0.9	<0.0528	<0.0793	0.665	0.516	0.992	<0.0511
	62577-800-5-SS	Sub-Slab	10/12/2016	15,000	530	37 J	<16	<25	<11	110	260	22 J	11,000	<10
	62577-800-5-IA	Indoor Air		1.13	0.169 J	<0.0793	<0.0809	0.642	<0.0528	<0.0793	0.307 J	1.5	1	<0.0511
800-6	62577-800-6-SS	Sub-Slab	3/23/2016	4,500	<16	75 J	<16	<25	<11	<16	680	<16	2,000	<10
	62577-800-6-IA	Indoor Air		2.03	0.122 J	0.168 J	0.174 J	0.739	<0.0528	<0.0793	0.455	0.197 J	1	<0.0511
	62577-800-6-SS	Sub-Slab	10/12/2016	4,300	<16	83	<16	<25	<11	<16	780	<16	2,100	<10
	62577-800-6-IA	Indoor Air		3.86	0.454	0.685	<0.0809	0.716	<0.0528	0.445	0.755	2.5	2.86	<0.0511
800-7	62577-800-7-SS	Sub-Slab	3/23/2016	2,200	<16	<16	<16	<25	<11	<16	220	<16	1,700	<10
	62577-800-7-IA	Indoor Air		1.97	0.118 J	0.191 J	0.180 J	0.716	<0.0528	<0.0793	0.413	0.203	1.12	<0.0511
	62577-800-7-SS	Sub-Slab	10/12/2016	2,500	<16	<16	<16	<25	<11	<16	270	<16	1,600	<10
	62577-800-7-IA	Indoor Air		3.23	0.354	0.434	0.319	0.638	<0.0528	0.307	0.695	0.942	2.51	<0.0511
AA-1	62577-800-AA-1	Outdoor Ambient	3/23/2016	0.705	0.256	<0.0793	<0.0809	1.03	0.351	0.345	0.651	<0.0793	0.736	0.216
	62577-800-AA-1	Outdoor Ambient	10/12/2016	0.674	0.103 J	<0.0793	<0.0809	0.775	<0.0528	0.96	0.289 J	0.154 J	0.49	<0.0511
AA-2	62577-800-AA-2	Outdoor Ambient	3/23/2016	0.384	<0.0809	<0.0793	<0.0809	0.822	<0.0528	<0.0793	0.383	0.123 J	0.407	<0.0511
	62577-800-AA-2	Outdoor Ambient	10/12/2016	0.614	<0.0809	<0.0793	<0.0809	0.759	<0.0528	<0.0793	0.299 J	<0.0793	0.468	<0.0511

Notes:

J' values represent labortory-estimated concentrations and represent values below laboratory reporting limits but above laboratory method detection limits.

Highlighted values represent concentrations above established industrial soil vapor screening levels.

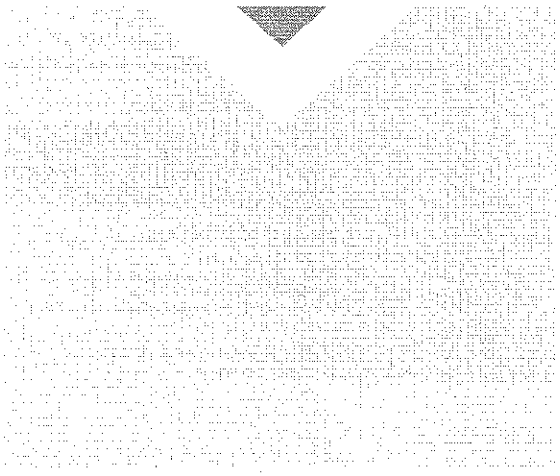
There were no exceedences of established industrial indoor air screening levels.

Industrial Soil Vapor Screening Levels:

TCE: 280 µg/m³ PCE: 5,600 µg/m³

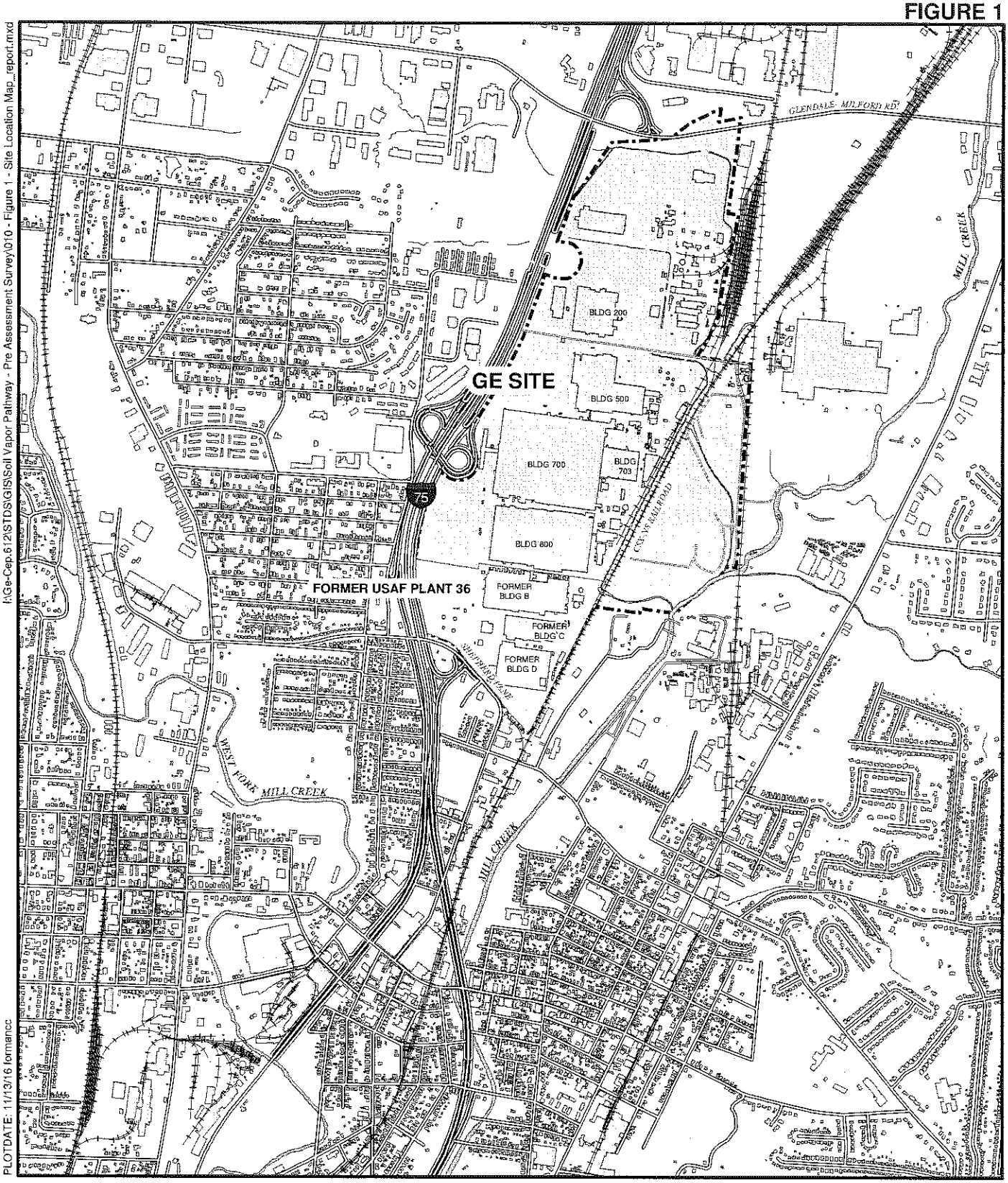
Industrial Indoor Air Screening Levels:

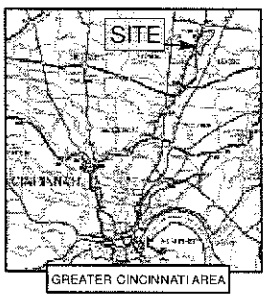
TCE: 8.4 µg/m³ PCE: 168 µg/m³



Figures

FIGURE 1





FACILITY SOIL VAPOR SUMMARY REPORT
GE EVENDALE, OHIO

SITE LOCATION MAP

N

0 800 1,600 3,200
Feet

O'BRIEN & GERE ENGINEERS, INC

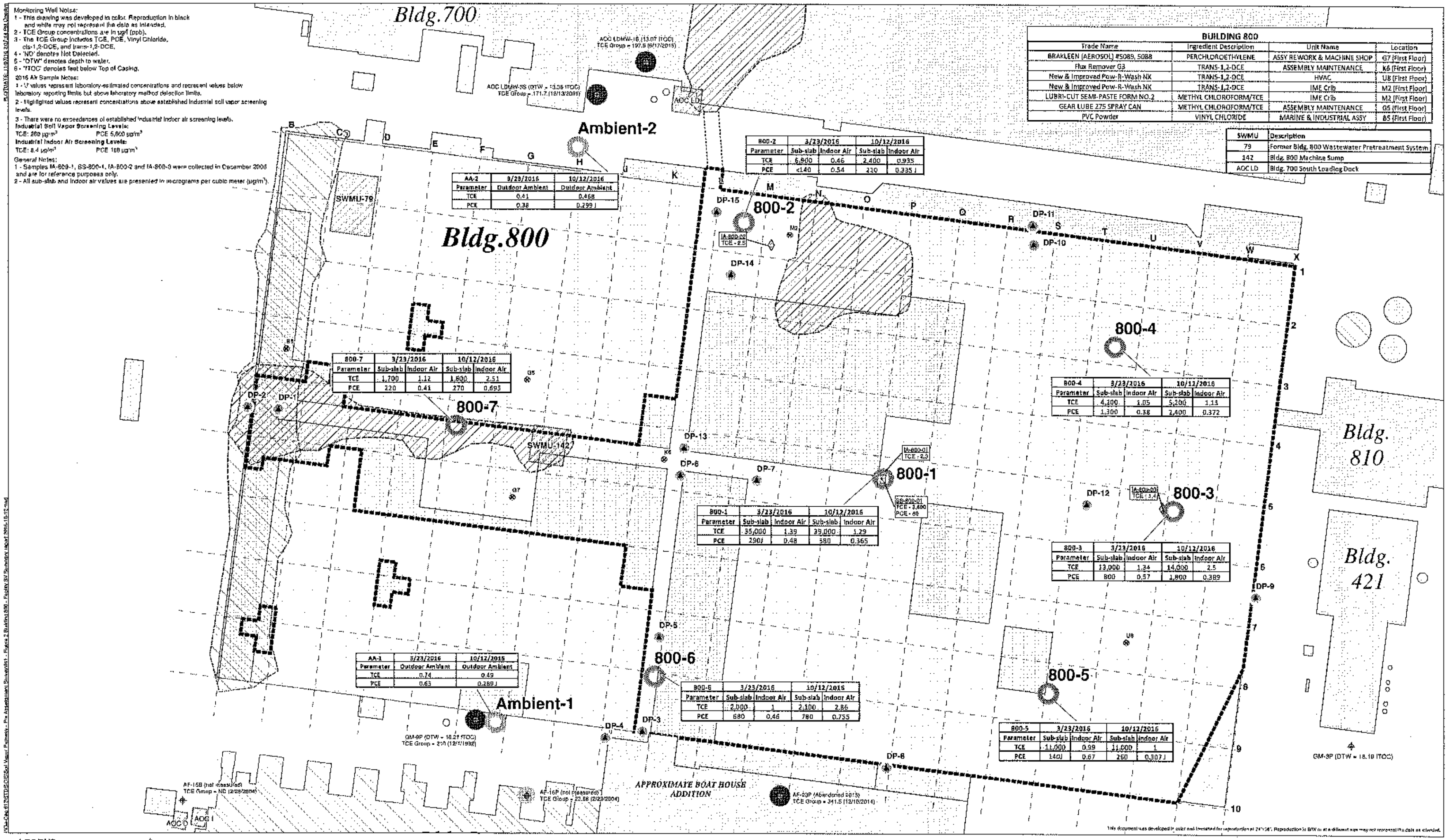
612/62577/001
NOVEMBER 2016

I:\Ge-Cep.612\STDS\GIS\Soil Vapor Pathway - Pre Assessment Survey\010 - Figure 1 - Site Location Map_report.mxd

PLOTDATE: 11/13/16 formancc

DRAFT DOCUMENT - PRIVILEGED AND CONFIDENTIAL

FIGURE 2



Monitoring Well Notes:

1 - This drawing was developed in color. Reproduction in black and white may not represent the data as intended.
2 - TCE Group concentrations are in ug/l (ppb).
3 - The TCE Group includes TCE, PCE, Vinyl Chloride, cis-1,2-DCE, and trans-1,2-DCE.
4 - 'ND' denotes Not Detected.
5 - "DTW" denotes depth to water.
6 - "ITOC" denotes feet below Top of Casing.

2016 Air Sample Notes:

1 - 'J' values represent laboratory-estimated concentrations and represent values below laboratory reporting limits but above laboratory method detection limits.
2 - Highlighted values represent concentrations above established industrial soil vapor screening levels.
3 - There were no exceedances of established industrial indoor air screening levels.

Industrial Soil Vapor Screening Levels:
TCE: 280 µg/m³ PCE 5,600 µg/m³

Industrial Indoor Air Screening Levels:
TCE: 8.4 µg/m³ PCE 168 µg/m³

General Notes:

1 - Samples IA-800-1, SS-800-1, IA-800-2 and IA-800-3 were collected in December 2006 and are for reference purposes only.
2 - All sub-slab and indoor air values are presented in micrograms per cubic meter (µg/m³).

BUILDING 800			
Trade Name	Ingredient Description	Unit Name	Location
BRAKLEEN (AEROSOL) #5089, 5088	PERCHLOROETHYLENE	ASSY REWORK & MACHINE SHOP	G7 (First Floor)
Flux Remover G3	TRANS-1,2-DCE	ASSEMBLY MAINTENANCE	K6 (First Floor)
New & Improved Pow-R-Wash NX	TRANS-1,2-DCE	HVAC	U8 (First Floor)
New & Improved Pow-R-Wash NX	TRANS-1,2-DCE	IME Crib	M2 (First Floor)
LUBRI-CUT SEMI-PASTE FORM NO.2	METHYL CHLOROFORM/TCE	IME Crib	M2 (First Floor)
GEAR LUBE 275 SPRAY CAN	METHYL CHLOROFORM/TCE	ASSEMBLY MAINTENANCE	G5 (First Floor)
PVC Powder	VINYL CHLORIDE	MARINE & INDUSTRIAL ASSY	B5 (First Floor)

SWMU	Description
79	Former Bldg. 800 Wastewater Pretreatment System
142	Bldg. 800 Machine Sump
AOC LD	Bldg. 700 South Loading Dock

AA-2	3/23/2016	10/12/2016
Parameter	Outdoor Ambient	Outdoor Ambient
TCE	0.41	0.468
PCE	0.38	0.299 J

800-2	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	6,900	0.46	2,400	0.935
PCE	<140	0.54	210	0.335 J

800-7	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	1,700	1.12	1,600	2.51
PCE	220	0.41	270	0.695

800-4	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	4,100	1.05	5,200	1.13
PCE	1,300	0.38	2,400	0.372

800-1	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	35,000	1.39	39,000	1.29
PCE	290J	0.48	580	0.365

800-3	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	13,000	1.34	14,000	2.5
PCE	800	0.57	1,800	0.389

AA-1	3/23/2016	10/12/2016
Parameter	Outdoor Ambient	Outdoor Ambient
TCE	0.74	0.49
PCE	0.65	0.289 J

800-6	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	2,000	1	2,100	2.86
PCE	680	0.46	780	0.755

800-5	3/23/2016		10/12/2016	
Parameter	Sub-slab	Indoor Air	Sub-slab	Indoor Air
TCE	11,000	0.99	11,000	1
PCE	140J	0.67	260	0.307 J

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LEGEND

- BASEMENT EXTENT
- BUILDINGS
- INACCESSIBLE AREA
- ACCESSIBLE AREA
- BASEMENT FLOOD AREA
- FIRST FLOOR FLOOD AREA
- PERCHED ZONE MONITORING WELL
- CHEMICAL INVENTORY LOCATION
- INDOOR AIR SAMPLE LOCATION (2006)
- SUBSLAB AIR SAMPLE LOCATION (2006)
- DIFFERENTIAL PRESSURE LOCATION
- INDOOR AIR AND SUBSLAB SAMPLE LOCATIONS
- AMBIENT SAMPLE LOCATIONS
- COLUMN LINES (COLUMNS AT INTERSECTIONS)
- SWMU/AOC

TCE GROUP CONCENTRATION KEY

- NOT DETECTED OR NOT SAMPLED
- DETECTED BUT LESS THAN 10 ug/l
- GREATER THAN 10 ug/L; LESS THAN 100 ug/L
- GREATER THAN 100 ug/L

FACILITY SOIL VAPOR SUMMARY REPORT
GE EVENDALE, OHIO

BUILDING 800- SUB-SLAB AND INDOOR AIR DATA SUMMARY

0 50 100 200
Feet

BUILDING NOTES:

1 - SLAB THICKNESS IN BUILDING 800 VARIED BETWEEN 6 AND 10 INCHES DURING SUB-SLAB SAMPLING POINT INSTALLATION.
2 - PIERS AT THE BASE OF THE COLUMNS CAN BE AS THICK AS 22 INCHES.
3 - PIERS VARY IN AREA FROM 3 FOOT SQUARE TO 10 FOOT SQUARE (DEPENDENT ON PIER THICKNESS).
4 - ACCORDING TO A FLOOD STUDY CONDUCTED BY CDM SMITH IN 2010, BUILDING 800 BASEMENT FLOODED IN 2001 DUE TO RUNOFF FROM AN ADJACENT PARKING LOT AS WELL AS AN OFFLINE LEAD PUMP. ADDITIONAL GARAGE RAMP FLOODING OCCURRED DUE TO INADEQUATE PUMPS. HIGH GROUNDWATER WAS NOT REFERENCED AS A CONTRIBUTING FACTOR TO FLOODING."

N

GE-CEP/STDS/002
NOVEMBER 2016

O'BRIEN & GERE ENGINEERS, INC.

Appendix A

Field Forms

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.040	Date	3/23/16
Project Name	Facility Vapor Assessment	Collector	CF/TD
Structure Location	E/W Hallway	Sample Locations	between cols. P5⅓ & Pa5⅓
PID/FID meter ID	/		
Sample Duration (Intended)	8 hrs		

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air, SS-DUP, (Ambient), IA-DUP	
Sample ID	800-1-IA	Sample ID	800-1-SS	Sample ID	800-AA-1
Canister ID	866	Canister ID	1126	Canister ID	1216
Flow Controller ID	415282	Flow Controller ID	336712	Flow Controller ID	301135
Date/Time start	3/23/16 856	Date/Time start	3/23/16 856	Date/Time start	3/23/16 920
Date/Time end	3/23/16 1300	Date/Time end	3/23/16 1632	Date/Time end	3/23/16 1653
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	0.0
Start pressure	-29.1	Start pressure	-29.2	Start pressure	-29.2
End pressure	-3.8	End pressure	-8.4	End pressure	-9.3
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	59°F
PID/FID reading	0.0 ppb	PID/FID reading	598 ppb	PID/FID reading	0 ppb
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	NA
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	NA
		Chamber tracer gas concentration:	50% He	Location: south side of Bldg. 800, west of boatyard	
		Tracer gas concentration during purging:	0.0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	N
Intake height above floor (in)	4 ft.	Floor slab depth	10"	Distance to road (ft)	50 ft
Floor surface type	Concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	0°
Room	Hallway	Floor surface type	Concrete	Distance to closest building (ft)	15 ft
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	36"
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments: /

Analytical method required

Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.040
Project Name Facility Vapor Assessment
Date 3/23/16
Collector CF/TD

Structure Location
Tool Design Room

PID/FID meter ID —
Sample Duration (Intended) 8 hrs

Sample Locations
14'0" North of col. Lb2
4'10" West of col. Lb2

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air / SS-DUP / Ambient / IA-DUP	
Sample ID	800-2-IA	Sample ID	800-2-SS	Sample ID	
Canister ID	1336	Canister ID	543	Canister ID	
Flow Controller ID	339290	Flow Controller ID	252295	Flow Controller ID	
Date/Time start	3/23/16 9[10]	Date/Time start	3/23/16 9[10]	Date/Time start	
Date/Time end	3/23/16 16[37]	Date/Time end	3/23/16 16[37]	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.2	Start pressure	-28.8	Start pressure	
End pressure	-8.3	End pressure	-9.5	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70°	Air temperature (°F)	70°	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	224 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3 ft.	Floor slab depth	~7"	Distance to road (ft)	
Floor surface type	carpet/concrete	Intake depth below floor (in)	~9"	Direction to closest building (degrees)	
Room	Tool Design Room	Floor surface type	carpet/concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Tool Design Room	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments: —

Analytical method required
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.040	Date	3/23/16
Project Name	Facility Vapor Assessment	Collector	CF / TD
Structure Location	Near carpenter's shop	Sample Locations	between col. V5 & V5 1/3
PID/FID meter ID	/		
Sample Duration (Intended)	8 hrs		

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air / SS-DUP / (Ambient) / IA-DUP	
Sample ID	800-3-IA	Sample ID	800-3-SS	Sample ID	800-AA-2
Canister ID	526	Canister ID	884	Canister ID	842
Flow Controller ID	301113	Flow Controller ID	301068	Flow Controller ID	304037
Date/Time start	3/23/16 8[10]	Date/Time start	3/23/16 8[10]	Date/Time start	3/23/16 9[32]
Date/Time end	3/23/16 1547	Date/Time end	3/23/16 1547	Date/Time end	3/23/16 16[58]
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	0.0
Start pressure	-29.2	Start pressure	-29.2	Start pressure	-29.1
End pressure	-8.1	End pressure	-7.6	End pressure	-8.0

Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	60°F
PID/FID reading	0 ppb	PID/FID reading	792 ppb	PID/FID reading	0 ppb
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	N/A
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	N/A
		Chamber tracer gas concentration:	50% He	Location: north of Bldg. 800	
		Tracer gas concentration during purging:	1000 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	N
Intake height above floor (in)	3 ft.	Floor slab depth	~10"	Distance to road (ft)	15 ft. South
Floor surface type	Concrete	Intake depth below floor (in)	~12"	Direction to closest building (degrees)	180°
Room	Near carpenter's shop	Floor surface type	Concrete	Distance to closest building (ft)	10 ft
Story/level	Basement	Room	Near carpenter's shop	Intake height above ground level (in)	48"
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments: /

Analytical method required

Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.040
Project Name Facility Vapor Assessment
Date 3/23/16
Collector CF/TD

Structure Location
Storage Area

PID/FID meter ID /

Sample Duration (Intended) 8 hrs

Sample Locations
between Cols Ta 2 2/3 & Tb 2 2/3

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air SS-DUP Ambient IA-DUP	
Sample ID	800-4-IA	Sample ID	800-4-SS	Sample ID	
Canister ID	1179	Canister ID	826	Canister ID	
Flow Controller ID	336719	Flow Controller ID	415305	Flow Controller ID	
Date/Time start	3/23/16 8:24	Date/Time start	3/23/16 8:24	Date/Time start	
Date/Time end	3/23/16 16:22	Date/Time end	3/23/16 16:22	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.2	Start pressure	-29.2	Start pressure	
End pressure	-6.4	End pressure	-7.1	End pressure	

Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	696 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0.0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	4 ft.	Floor slab depth	~6-7"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	~8-9"	Direction to closest building (degrees)	
Room	Storage Area	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Storage Area	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments: /

Analytical method required
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #: 62577.040
Project Name: Facility Vapor Assessment
Date: 3/23/16
Collector: CF/TD

Structure Location
col. T8 2/3, Fork Truck Maintenance

PID/FID meter ID: /

Sample Duration (Intended): 8 hrs

Sample Locations
12'10" north of col. T8 2/3
3'6" west of col. T8 2/3

Circle Sample Type: **Indoor Air** **SS-DUP** **Ambient** **IA-DUP**

Indoor Air Sample		**Sub-structure Sample**			
Sample ID	800-5-IA	Sample ID	800-5-SS	Sample ID	
Canister ID	502	Canister ID	884	Canister ID	
Flow Controller ID	399398	Flow Controller ID	301068	Flow Controller ID	
Date/Time start	3/23/16 842	Date/Time start	3/23/16 842	Date/Time start	
Date/Time end	3/23/16 1554	Date/Time end	3/23/16 1554	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.1	Start pressure	-29.1	Start pressure	
End pressure	-9.2	End pressure	-8.5	End pressure	

Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	596 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He.		
		Tracer gas concentration during purging:	0 ppm		
For indoor location:		**For indoor location:**		**For outdoor location:**	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	~~10"~~ 3 ft.	Floor slab depth	10"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	
Room	Fork Truck Maintenance Area	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Fork Truck Maintenance Area	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y
Comments: /

Analytical method required
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.040
Project Name Facility Vapor Assessment
Date 3/23/16
Collector CF/TD

Structure Location
N/S Hallway - col. L9
PID/FID meter ID —
Sample Duration (Intended) 8 hrs

Sample Locations
3'9" west of col. L9
4'10" south of col. L9
(N/S Hallway)

Circle Sample Type: Indoor Air / SS-DUP / Ambient / IA-DUP

Indoor Air Sample		Sub-structure Sample			
Sample ID	800-6-IA	Sample ID	800-6-SS	Sample ID	
Canister ID	890	Canister ID	1200	Canister ID	
Flow Controller ID	338067	Flow Controller ID	675024	Flow Controller ID	
Date/Time start	3/23/16 740	Date/Time start	3/23/16 740	Date/Time start	
Date/Time end	3/23/16 1522	Date/Time end	3/23/16 1522	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.2	Start pressure	-29.2	Start pressure	
End pressure	-7.6	End pressure	-5.5	End pressure	

Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70°	Air temperature (°F)	70°	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	354 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He.		
		Tracer gas concentration during purging:	0.0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3.5 ft.	Floor slab depth	8"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	10"	Direction to closest building (degrees)	
Room	Hallway	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y
Comments: /

Analytical method required
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.040	Date	3/23/16
Project Name	Facility Vapor Assessment	Collector	CF/TD
Structure Location	Col. Fa 5'/3 (E/W Hallway)	Sample Locations	E/W Hallway between col F 5'/3 & Fa 5'/3
PID/FID meter ID	/		
Sample Duration (Intended)	8 hrs		

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air SS-DUP Ambient IA-DUP	
Sample ID	800-7-IA	Sample ID	800-7-SS	Sample ID	
Canister ID	886	Canister ID	1180	Canister ID	
Flow Controller ID	336714	Flow Controller ID	301144	Flow Controller ID	
Date/Time start	3/23/16 7:26	Date/Time start	3/23/16 7:26	Date/Time start	
Date/Time end	3/23/16 15:13	Date/Time end	3/23/16 15:13	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.2	Start pressure	-29.2	Start pressure	
End pressure	-7.2	End pressure	-8.0	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	0.0 ppb	PID/FID reading	0.0 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0.0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3.5 ft.	Floor slab depth	10"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	
Room	Hallway	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments: /

Analytical method required ______

Laboratory used ______

O'BRIEN & GERE

Indoor Air Quality Building Survey

Date: 3/23/16
Collector: CF / TD
Affiliation: O'Brien & Gere

Access Contact: Joanne Reinhold
Phone: (513) 638-2333
Best time to contact: Any
Address: 1 Neumann Way, Building 800
Tax ID: —

Owner [X] Renter [ ] Other [ ]
Access Agreement Signed?: N/A

Date built: 1942/43
Yrs. of residence: Since construction
No. of occupants: ______

Building type:
Residential [ ] Commercial [X]
School [ ] Church [ ]
Industrial [ ] Other ______

Check all that apply:

Ranch [ ] Cape [ ] 3-Family [ ]
Raised Ranch [ ] Colonial [ ] Mobile Home [ ]
2-Family [ ] Duplex [ ] Other (specify) Aviation storage, office, & manufacturing facility
Apartments [ ] Condominium [ ]

Above grade building construction

Wood frame [ ] Brick [ ]
Poured concrete [X] Concrete block [X]
Stone [ ] Other ______

Foundation construction

Fieldstone [ ] Poured concrete [X]
Solid top concrete block [ ] Open top concrete block [ ]
Slab on grade [ ] Other ______

Is the owner aware of any additions made to the original design of the structure? (please specify)
None

Utilities

Sewer: Public [X] Private [ ] Other ______
Water: Public [X] Private [ ] Other ______
Spring [ ] Well [ ]
Hot water heater type: Gas [ ] Oil [ ] Electric [ ] Other ______

Heating, ventilation, and air conditioning systems

Primary heat type: Hot air [ ] Hot water [ ] Steam radiator [ ] Electric [ ] Other ______
Fuel type (heat): Natural gas [X] Fuel oil [ ] Electric [ ] Wood [ ] Other ______
Secondary heat type: Kerosene [ ] Wood stove [ ] Electric [ ] Propane [ ] Other ______

Ventilation types: Attic fan [ ] Kitchen hood [ ] Bathroom fan [ ] Other ______
Whole house fan [ ] Air filtration [ ] Induced fireplace [ ] Other ______
Air conditioning: Window units [ ] Furnance unit [ ] Electric [ ] Other ______

O'BRIEN & GERE

Indoor Air Quality Building Survey

Date: ______
Collector: ______
Affiliation: O'Brien & Gere

Basement type

- None [ ]
- Full [ ]
- Half [X]
- Slab on grade [ ]
- Vented crawlspace [ ]
- Unvented crawlspace [ ]
- Other ______

If slab on grade, is there a garage with occupied space above? N/A

Basement depth below grade (feet)

Front: 15' (east end), 12' (west end) Rear ______ Side 1 ______ Side 2 ______

Basement characteristics

General:		Floor:		Walls:			
No. of rooms	[ ]	Earth	[ ]	Finished	[X]	Paneling	[ ]
Bathroom	[ ]	Concrete	[X]	Unfinished	[ ]	Tile	[ ]
Basement use	______	Tile	[ ]	Painted	[ ]	Insulated	[ ]
		Carpet	[ ]	Sheetrock	[ ]	Uninsulated	[ ]
		Other ______		Other: Mainly concrete block			

Check if present:

Fireplace	[ ]	Elevator	[X]	French drain	[ ]
Sump pump	[X] (several)	Ash cleanout	[ ]	Floor cracks	[X] (none significant, ~1")
Floor drains	[ ]	Water damage	[X] → some pipe/ceiling leakages	Wall cracks	[X] some, none significant
Interior walls	[ ]	Jacuzzi/hot tub	[ ]	Other	

Does the basement have a moisture problem? No

Does the basement ever flood? (specify frequency) No, only during 2001 event

Is there water in the sump or drains? No access

Is there evidence of possible mold? No

Does the basement have a radon system installed? No

Has there been recent purchases of furnishings (carpets, rugs, linoleum, tile, or funiture) or remodeling (new construction,roofing, or floor stripping? (please specify) No

Chemical usage, exposure and storage

Identify occupant hobbies:

Painting	[ ]	Electronics	[X]	Model making	[X]
Stained glass	[ ]	Woodworking	[ ]	Auto repair	[ ]
Jewelry making	[ ]	Furniture refinishing	[ ]	Other	Aviation Manufacturing, Fork Truck Maintenance, Storage

Where in the structure are these hobbies conducted? Southeast corner

Does the occupants' job require chemical exposure? ______

If so, where are the occupants clothes cleaned? off site

Has the structure been fumigated in the last year? Yes, roach issues

If so, is fumigation regularly performed? (how often) ______

Are pesticides frequently applied to lawn or garden? N/A

If so, are they stored on the property? N/A

Are dry-cleaned clothes kept in vicinity of sampling? No

Is there smoking in the building? No

Have cleaning products been used recently? (when & type) Not aware of any

Has painting/staining been done recently? (when & where) NO

O'BRIEN & GERE

Indoor Air Quality Building Survey

Date:
Collector:
Affiliation: O'Brien & Gere

Identify chemicals stored in the basement, or garage if structure is slab on grade (include fuels, solvents, cleaners, etc.)

Sample Location	Brand	Product	Amount stored
800-1	None		
800-2	None		
800-3	Comet	Disinfecting Bathroom Cleaner	1 spray bottle
800-4	None (some metal dust)		
800-5	Fork Truck Batteries, Hydraulic Motor	UCON Hydrolube 732	Unknown
800-6	None		
800-7	None		

Comments

Is there any other information about the structural features of this building, the habits of its occupants or potential sources for chemical contaminents to the indoor air that may be of importance in facilitating the evaluation of the indoor air quality of the building?

Sampling Locations (sketch plan views)

Basement	First Floor	Outdoor (indicate wind direction)

OBRIEN & GERE

Building Survey - Chemical Inventory Attachment

Preparer's Name: ____________________ Date: ____________________

Preparer's Affiliation: ____________________ Room/Area: ____________________

Site Name: ____________________ Address: ____________________

Identify chemicals stored in the basement (or 1st floor living space/garage if structure is slab on grade). Include fuels, solvents, cleaners, polyresins, etc. Use separate inventory sheet for each room/area surveyed

Brand/Product	Volatile ingredients/CAS Nos.	Amount stored

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.042
Project Name Facility Vapor Assessment Summer
Structure Location
Outdoors
PID/FID meter ID ——
Sample Duration (Intended) 8 hrs.

Date 10/12/16
Collector CT/TD
Sample Locations
South side of Bldg 800, West of boxyard

Indoor Air Sample	Sub-structure Sample	Circle Sample Type: Indoor Air / SS-DUP / (Ambient) / IA-DUP
Sample ID	Sample ID	Sample ID 800-AA-1
Canister ID	Canister ID	Canister ID 1420
Flow Controller ID	Flow Controller ID	Flow Controller ID 930842
Date/Time start	Date/Time start	Date/Time start 10/12/16 834
Date/Time end	Date/Time end	Date/Time end 10/12/16 1605
Gauge prior to start	Gauge prior to start	Gauge prior to start 0.0
Start pressure	Start pressure	Start pressure -28.7
End pressure	End pressure	End pressure -11.0
Complete all that apply:	Complete all that apply:	Complete all that apply:
Air temperature (°F)	Air temperature (°F)	Air temperature (°F) 60°
PID/FID reading	PID/FID reading	PID/FID reading ——
in. tubing used	in. tubing used	in. tubing used NA
Tubing purged?	Tubing purged?	Tubing purged? NA
	Chamber tracer gas concentration:	
	Tracer gas concentration during purging:	
For indoor location:	For indoor location:	For outdoor location:
Noticeable odor	Noticeable odor	Noticeable odor N
Intake height above floor (in)	Floor slab depth	Distance to road (ft) 50 ft.
Floor surface type	Intake depth below floor (in)	Direction to closest building (degrees) 0°
Room	Floor surface type	Distance to closest building (ft) 15 ft.
Story/level	Room	Intake height above ground level (in) 36"
	Story/level	

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments:

Analytical method required
Laboratory used

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O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62579.042

Project Name Facility Vapor Assessment Summer

Structure Location

Outdoors

PID/FID meter ID —

Sample Duration (Intended) 8hr.

Date 10/12/16

Collector CF/TD

Sample Locations

North of Bldg 800

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air SS-DUP (Ambient) IA-DUP	
Sample ID		Sample ID		Sample ID	800-AA-2
Canister ID		Canister ID		Canister ID	829
Flow Controller ID		Flow Controller ID		Flow Controller ID	415276
Date/Time start		Date/Time start		Date/Time start	10/12/16 839
Date/Time end		Date/Time end		Date/Time end	10/12/16 1611
Gauge prior to start		Gauge prior to start		Gauge prior to start	0.0
Start pressure		Start pressure		Start pressure	-29.5
End pressure		End pressure		End pressure	-4.5
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)		Air temperature (°F)		Air temperature (°F)	60°F
PID/FID reading		PID/FID reading		PID/FID reading	—
in. tubing used		in. tubing used		in. tubing used	N/A
Tubing purged?		Tubing purged?		Tubing purged?	N/A
		Chamber tracer gas concentration:			
		Tracer gas concentration during purging:			
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor		Noticeable odor		Noticeable odor	N
Intake height above floor (in)		Floor slab depth		Distance to road (ft)	15ft. S
Floor surface type		Intake depth below floor (in)		Direction to closest building (degrees)	180°
Room		Floor surface type		Distance to closest building (ft)	10ft.
Story/level		Room		Intake height above ground level (in)	48"
		Story/level			

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments:

Analytical method required

Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.042	Date	10/12/16
Project Name	Facility Vapor Assessment	Collector	CF/TD
Structure Location	E/W Hallway	Sample Locations	between cols. P5 1/3 & Pa 5 1/3
PID/FID meter ID			
Sample Duration (Intended)	8hrs		

Circle Sample Type: **Indoor Air** **SS-DUP** **Ambient** **IA-DUP**

Indoor Air Sample		Sub-structure Sample			
Sample ID	800-1-IA	Sample ID	800-1-SS	Sample ID	
Canister ID	508	Canister ID	896	Canister ID	
Flow Controller ID	249935	Flow Controller ID	710626	Flow Controller ID	
Date/Time start	10/12/16 0700	Date/Time start	10/12/16 0700	Date/Time start	
Date/Time end	10/12/16 ~~1500~~ 1459	Date/Time end	10/12/16 ~~1500~~ 1459	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.3	Start pressure	-29.6	Start pressure	
End pressure	-3.9	End pressure	-9.0	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	2283 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	4 ft.	Floor slab depth	10"	Distance to road (ft)	
Floor surface type	concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	
Room	Hallway	Floor surface type	concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments: /

Analytical method required

Laboratory used

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O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577-042
Project Name Facility Vapor Assessment
Date 10/12/16
Collector CF/TD

Structure Location
Tool Design Room
PID/FID meter ID —
Sample Duration (Intended) 8 hrs

Sample Locations
14' 0" North of col Lb2
4' 10" West of col Lb2

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air SS-DUP Ambient IA-DUP	
Sample ID	800-2-IA	Sample ID	800-2-SS	Sample ID	
Canister ID	515	Canister ID	1233	Canister ID	
Flow Controller ID	958115	Flow Controller ID	958069	Flow Controller ID	
Date/Time start	10/12/16 712	Date/Time start	10/12/16 712	Date/Time start	
Date/Time end	10/12/16 1506	Date/Time end	10/12/16 1506	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.2	Start pressure	-29.5	Start pressure	
End pressure	-4.6	End pressure	-4.9	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70°	Air temperature (°F)	70°	Air temperature (°F)	
PID/FID reading	0 ppb	PID/FID reading	0 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50%		
		Tracer gas concentration during purging:	0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3 ft.	Floor slab depth	~7"	Distance to road (ft)	
Floor surface type	carpet/concrete	Intake depth below floor (in)	~9"	Direction to closest building (degrees)	
Room	Tool Design Room	Floor surface type	carpet/concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Tool Design Room	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments: /

Analytical method required
Laboratory used

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O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.042	Date	10/12/16
Project Name	Facility Vapor Assessment	Collector	CF/TD

Structure Location

Near carpenter's shop

Sample Locations

between Col. V5 & V5 1/3

PID/FID meter ID —

Sample Duration (Intended) 8 hrs

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air / SS-DUP / Ambient / IA-DUP	
Sample ID	800-3-IA	Sample ID	800-3-SS	Sample ID	
Canister ID	1406	Canister ID	848	Canister ID	
Flow Controller ID	966903	Flow Controller ID	~~828~~ 824840	Flow Controller ID	
Date/Time start	10/12/16 730	Date/Time start	10/12/16 736	Date/Time start	
Date/Time end	10/12/16 1530	Date/Time end	10/12/16 1536	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-28.2	Start pressure	-29.5	Start pressure	
End pressure	(TD) ~~-2.3~~ -2.3	End pressure	-5.2	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	182 ppb	PID/FID reading	1756 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	186 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3 ft.	Floor slab depth	~10"	Distance to road (ft)	
Floor surface type	concrete	Intake depth below floor (in)	~12"	Direction to closest building (degrees)	
Room	Near carpenter's shop	Floor surface type	concrete	Distance to closest building (ft)	
Story/level	basement	Room	Near carpenter's shop	Intake height above ground level (in)	
		Story/level	basement		

Building Survey and Chemical Inventory Form Completed? ____

Photographs Taken? ____

Comments: ____

Analytical method required ____

Laboratory used ____

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.042
Project Name Facility Vapor Assessment
Date 10/12/16
Collector CF/TD

Structure Location
Storage Area

Sample Locations
between cols. Ta 3 & Tb 2 2/3

PID/FID meter ID —
Sample Duration (Intended) 8 hrs

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air / SS-DUP / Ambient / IA-DUP	
Sample ID	800-4-IA	Sample ID	800-4-SS	Sample ID	
Canister ID	328	Canister ID	10388	Canister ID	
Flow Controller ID	239314	Flow Controller ID	958118	Flow Controller ID	
Date/Time start	10/12/16 7:26	Date/Time start	10/12/16 7:26	Date/Time start	
Date/Time end	10/12/16 15:16	Date/Time end	10/12/16 15:16	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.6	Start pressure	-29.6	Start pressure	
End pressure	-4.0	End pressure	-7.1	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	53 ppb	PID/FID reading	71 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	4 ft.	Floor slab depth	~6-7"	Distance to road (ft)	
Floor surface type	concrete	Intake depth below floor (in)	~8-9"	Direction to closest building (degrees)	
Room	Storage Area	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Storage Area	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments:

Analytical method required
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.042
Date 10/12/16
Project Name Facility Vapor ~~Assessment~~ Summer
Collector CF/TD

Structure Location
col. T8 2/3, Fork Truck Maintenance
PID/FID meter ID
Sample Duration (Intended)

Sample Locations
12' 10" north of col. T8 2/3
3' 6" west of col. T8 2/3

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: Indoor Air, SS-DUP, Ambient, IA-DUP	
Sample ID	800-5-IA	Sample ID	800-5-SS	Sample ID	
Canister ID	(TD) ~~1224~~ 504	Canister ID	880	Canister ID	
Flow Controller ID	958034	Flow Controller ID	840487	Flow Controller ID	
Date/Time start	10/12/16 815 (TD)	Date/Time start	10/12/16 815 (TD)	Date/Time start	
Date/Time end	10/12/16 ~~1546~~ 1415	Date/Time end	10/12/16 1415 ~~1546~~	Date/Time end	
Gauge prior to start	0.0 1546	Gauge prior to start	0.0 1415	Gauge prior to start	
Start pressure	(TD) ~~-27.8~~ -28.3	Start pressure	-29.6	Start pressure	
End pressure	-4.8	End pressure	(TD) ~~-4.8~~ -2.3	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	98 ppb	PID/FID reading	1018 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	0 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3 ft.	Floor slab depth	10"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	
Room	Fork Truck Maintenance Area	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Fork Truck Maintenance	Intake height above ground level (in)	
		Story/level			

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y
Comments:

Analytical method required
Laboratory used

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O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project # 62577.042
Project Name Facility Vapor Assessment
Date 10/12/16
Collector CF/TD

Structure Location
N/S Hallway - col. L9
PID/FID meter ID —
Sample Duration (Intended) 8 hrs.

Sample Locations
3'9" West of col. L9
4'10" south of col. L9
(N/S Hallway)

Indoor Air Sample		Sub-structure Sample		Circle Sample Type: SS-DUP / Ambient / IA-DUP / **Indoor Air**	
Sample ID	800-6-IA	Sample ID	800-6-SS	Sample ID	
Canister ID	1360	Canister ID	820	Canister ID	
Flow Controller ID	248253	Flow Controller ID	848496	Flow Controller ID	
Date/Time start	10/12/16 643	Date/Time start	10/12/16 643	Date/Time start	
Date/Time end	10/12/16 1231	Date/Time end	10/12/16 1443	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	-29.0	Start pressure	-29.5	Start pressure	
End pressure	-1.6	End pressure	-11.2	End pressure	
Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70°	Air temperature (°F)	70°	Air temperature (°F)	
PID/FID reading	175 ppb	PID/FID reading	145 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50% He		
		Tracer gas concentration during purging:	100 ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	N	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3.5 ft.	Floor slab depth	8"	Distance to road (ft)	
Floor surface type	Concrete	Intake depth below floor (in)	10"	Direction to closest building (degrees)	
Room	Hallway	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y
Photographs Taken? Y

Comments:

Analytical method required TO-15
Laboratory used

O'BRIEN & GERE

Multiple Vapor Intrusion Sampling Form

Project #	62577.042	Date	10/12/16
Project Name	Facility Vapor Assessment Skimmer	Collector	CF/TD
Structure Location	Col. Fa 5 1/3 (E/W Hallway)	Sample Locations	E/W Hallway b/w col F5 1/3 & Fa 5 1/3
PID/FID meter ID	—		
Sample Duration (Intended)	8 hrs		

Circle Sample Type: **Indoor Air** **SS-DUP** **Ambient** **IA-DUP**

Indoor Air Sample		**Sub-structure Sample**			
Sample ID	800-7-IA	Sample ID	800-7-SS	Sample ID	
Canister ID	1228	Canister ID	856	Canister ID	
Flow Controller ID	848497	Flow Controller ID	316950	Flow Controller ID	
Date/Time start	10/12/16 6:32	Date/Time start	10/12/16 6:32	Date/Time start	
Date/Time end	10/12/16 13:32	Date/Time end	10/12/16 14:32	Date/Time end	
Gauge prior to start	0.0	Gauge prior to start	0.0	Gauge prior to start	
Start pressure	~~-29.5~~ -28.6	Start pressure	-29.5	Start pressure	
End pressure	-2.0	End pressure	-12.9	End pressure	

Complete all that apply:		Complete all that apply:		Complete all that apply:	
Air temperature (°F)	70	Air temperature (°F)	70	Air temperature (°F)	
PID/FID reading	—	PID/FID reading	22 ppb	PID/FID reading	
in. tubing used	1/4 in	in. tubing used	1/4 in	in. tubing used	
Tubing purged?	Y	Tubing purged?	Y	Tubing purged?	
		Chamber tracer gas concentration:	50%		
		Tracer gas concentration during purging:	0.0ppm		
For indoor location:		For indoor location:		For outdoor location:	
Noticeable odor	none	Noticeable odor	N	Noticeable odor	
Intake height above floor (in)	3 ft.	Floor slab depth	10"	Distance to road (ft)	
Floor surface type	concrete	Intake depth below floor (in)	12"	Direction to closest building (degrees)	
Room	Hallway	Floor surface type	Concrete	Distance to closest building (ft)	
Story/level	Basement	Room	Hallway	Intake height above ground level (in)	
		Story/level	Basement		

Building Survey and Chemical Inventory Form Completed? Y

Photographs Taken? Y

Comments: /

Analytical method required TO-15

Laboratory used

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Appendix B

Photographic Log of Sampling Locations

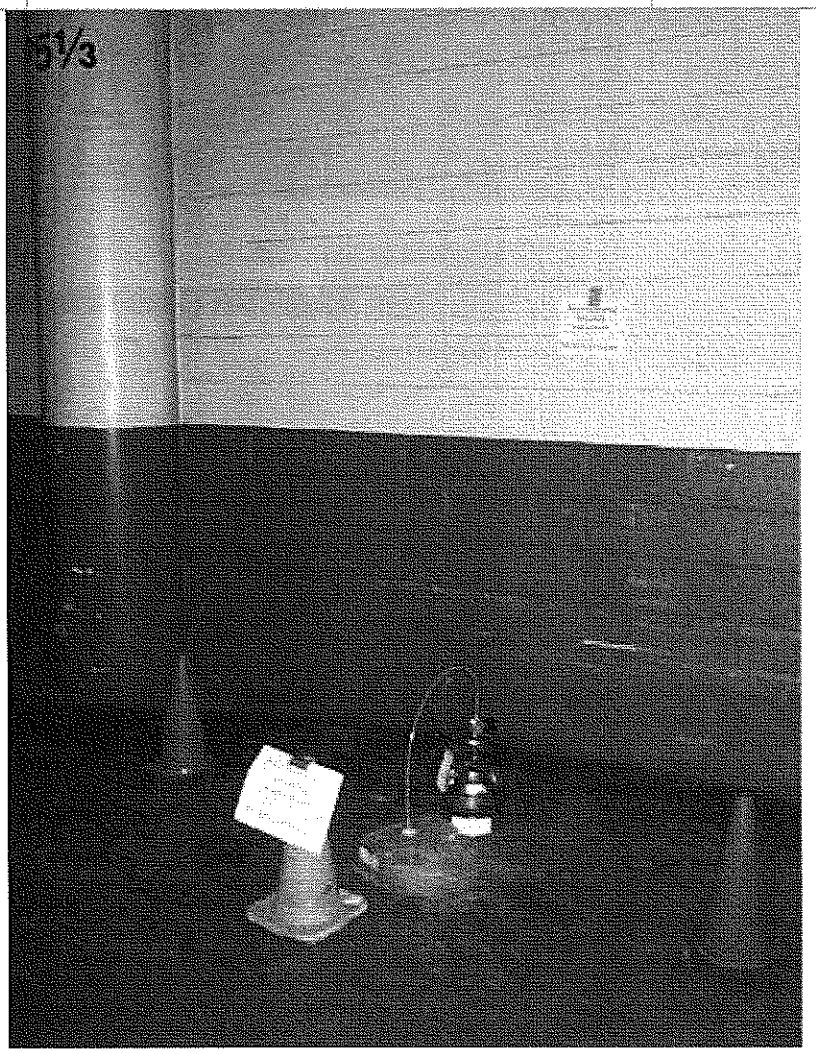
APPENDIX B – PHOTOGRAPHIC LOG OF SAMPLING LOCATIONS

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
1	3/23/2016

DESCRIPTION

Sampling location SS-800-1 near Column P5 1/3. Photo faces north.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
2	3/23/2016

DESCRIPTION

Sampling location SS-800-2 near Column Lb 2. Photo faces north.

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
3	3/23/2016

DESCRIPTION

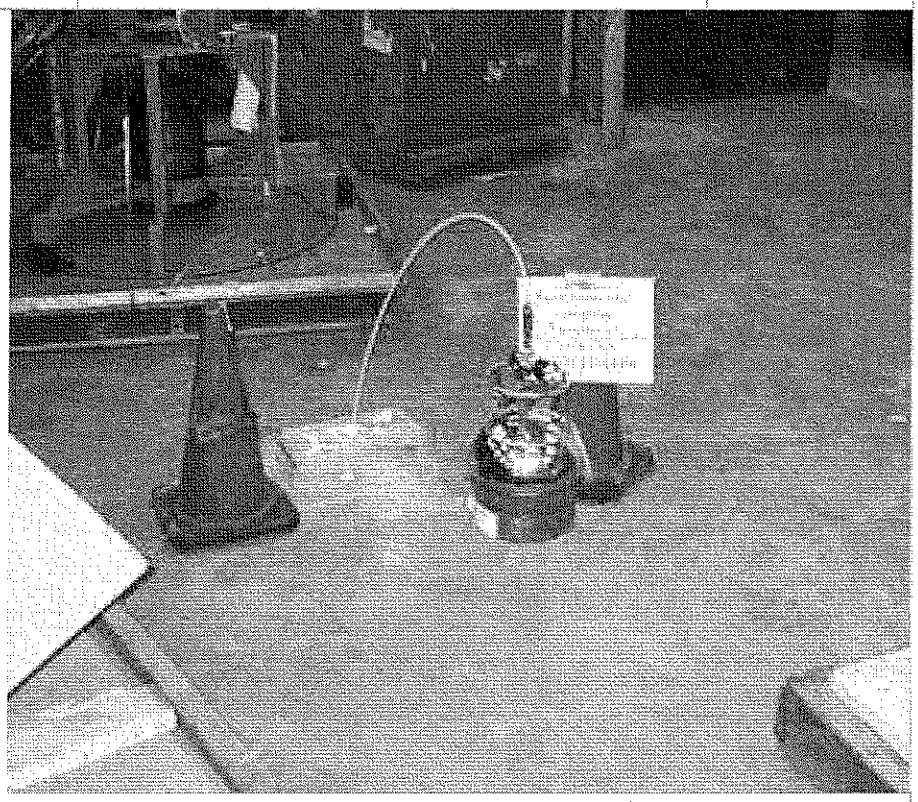
Sampling location SS-800-3 near Column V5 1/3. Photo faces east.

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
4	3/23/2016

DESCRIPTION

Sampling location SS-800-4 near Column TB 2 2/3. Photo faces northeast.

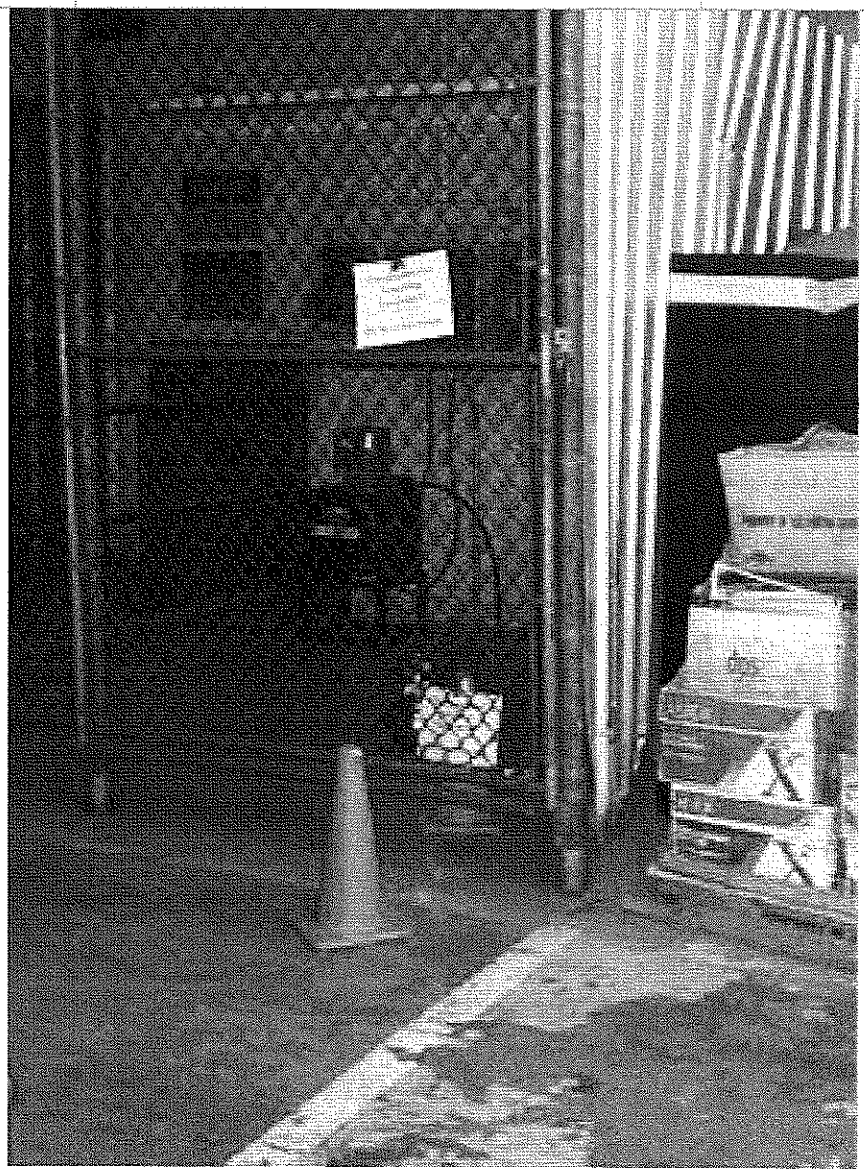


CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
5	3/23/2016

DESCRIPTION

Sampling location SS-800-5 near Column TB 2 2/3. Photo faces east.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
6	3/23/2016

DESCRIPTION

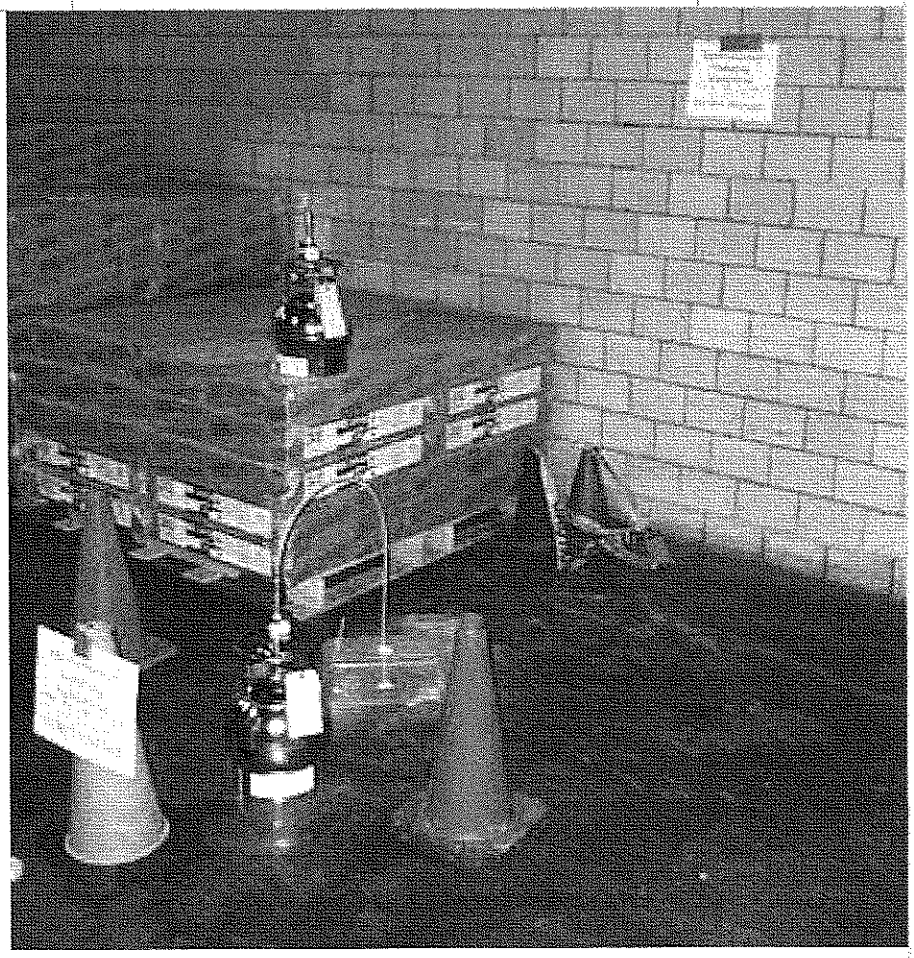
Sampling location SS-800-6 near Column L9 1/3. Photo faces east.

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
7	3/23/2016

DESCRIPTION

Sampling location SS-800-7 near Column F5 1/3. Photo faces north.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
8	3/23/2016

DESCRIPTION

Ambient outdoor air sampling location 800-AA-1 along the south side of Building 800. Photo faces north.

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
GE – OneEHS	GE Aviation – Evendale, Ohio (Building 800)	612|62577

PHOTO NO.	DATE:
9	3/23/2016

DESCRIPTION

Ambient outdoor air sampling location 800-AA-2 along the north side of Building 800. Photo faces southwest.

Appendix C

Laboratory Analytical Reports

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

Report Date: April 11, 2016

Project: GE - Evandale

Submittal Date: 03/29/2016
Group Number: 1645083
PO Number: 11600269
State of Sample Origin: OH

Client Sample Description	Lancaster Labs (LL) #
800-1-IA Air	8307857
800-AA-1 Air	8307858
800-2-IA Air	8307859
800-5-IA Air	8307860
800-3-IA Air	8307861
800-AA-2 Air	8307862
800-7-IA Air	8307863
800-6-IA Air	8307864
800-4-IA Air	8307865
800-6-SS Air	8307866
800-3-SS Air	8307867
800-2-SS Air	8307868
800-4-SS Air	8307869
800-5-SS Air	8307870
800-1-SS Air	8307871
800-7-SS Air	8307872

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

Electronic Copy To	O'Brien & Gere, Inc.	Attn: Matt Traister
Electronic Copy To	O'Brien & Gere, Inc.	Attn: Chase Forman

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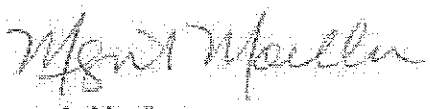
Respectfully Submitted,



Megan A. Moeller
Senior Specialist

(717) 556-7261

Sample Description: 800-1-IA Air
SUMMA# 866
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307857
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:56 by CF
through 03/23/2016 13:00
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.150	0.0200	0.941	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0587	0.0200	0.238	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0814	0.0200	0.329	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0789	0.0200	0.313	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0620	0.0200	0.246	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0958	0.0200	0.380	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0710	0.0200	0.482	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.429	0.0200	2.34	0.109	1
07345	Trichloroethene	79-01-6	0.259	0.0200	1.39	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/08/2016 23:16	Jacob E Bailey	1

Sample Description: 800-AA-1 Air
SUMMA# 1216
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307858
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 09:20 by CF
through 03/23/2016 16:53
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.164	0.0200	1.03	0.126	1
07345	Chloroethane	75-00-3	0.133	0.0200	0.351	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0633	0.0200	0.256	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	N.D.	0.0200	N.D.	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0869	0.0200	0.345	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0200	N.D.	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0960	0.0200	0.651	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.129	0.0200	0.705	0.109	1
07345	Trichloroethene	79-01-6	0.137	0.0200	0.736	0.107	1
07345	Vinyl Chloride	75-01-4	0.0846	0.0200	0.216	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/09/2016 00:13	Jacob E Bailey	1

Sample Description: 800-2-IA Air
SUMMA# 1336
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307859
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 09:10 by CF
through 03/23/2016 16:37
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.135	0.0200	0.847	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0240 J	0.0200	0.0971 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0610	0.0200	0.247	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0262 J	0.0200	0.104 J	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0247 J	0.0200	0.0980 J	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0796	0.0200	0.540	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.155	0.0200	0.843	0.109	1
07345	Trichloroethene	79-01-6	0.0862	0.0200	0.463	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/09/2016 01:10	Jacob E Bailey	1

Sample Description: 800-5-IA Air
SUMMA# 502
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307860
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:42 by CF
through 03/23/2016 15:56
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.143	0.0200	0.900	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0480 J	0.0200	0.194 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0859	0.0200	0.347	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0588	0.0200	0.233	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.130	0.0200	0.516	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0980	0.0200	0.665	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.309	0.0200	1.69	0.109	1
07345	Trichloroethene	79-01-6	0.185	0.0200	0.992	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/09/2016 02:07	Jacob E Bailey	1

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Analysis Report

Sample Description: 800-3-IA Air
SUMMA# 526
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307861
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:10 by CF
through 03/23/2016 15:47
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.127	0.0200	0.799	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0512	0.0200	0.207	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0736	0.0200	0.298	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0555	0.0200	0.220	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.616	0.0200	2.44	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0833	0.0200	0.565	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.425	0.0200	2.32	0.109	1
07345	Trichloroethene	79-01-6	0.249	0.0200	1.34	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/09/2016 03:04	Jacob E Bailey	1

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Analysis Report

Sample Description: 800-AA-2 Air
SUMMA# 842
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307862
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 09:32 by CF
through 03/23/2016 16:58
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.131	0.0200	0.822	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	N.D.	0.0200	N.D.	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	N.D.	0.0200	N.D.	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0310 J	0.0200	0.123 J	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0565	0.0200	0.383	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.0704	0.0200	0.384	0.109	1
07345	Trichloroethene	79-01-6	0.0757	0.0200	0.407	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1609930AA	04/09/2016 04:02	Jacob E Bailey	1

Sample Description: 800-7-IA Air
SUMMA# 886
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307863
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 07:26 by CF
through 03/23/2016 15:13
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.114	0.0200	0.716	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0292 J	0.0200	0.118 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0445 J	0.0200	0.180 J	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0482 J	0.0200	0.191 J	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0512	0.0200	0.203	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0608	0.0200	0.413	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.361	0.0200	1.97	0.109	1
07345	Trichloroethene	79-01-6	0.208	0.0200	1.12	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1610230AA	04/11/2016 16:19	Jacob E Bailey	1

Sample Description: 800-6-IA Air
SUMMA# 890
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307864
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 07:40 by CF
through 03/23/2016 15:22
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.118	0.0200	0.739	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0300 J	0.0200	0.122 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0430 J	0.0200	0.174 J	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0423 J	0.0200	0.168 J	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0498 J	0.0200	0.197 J	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0670	0.0200	0.455	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.373	0.0200	2.03	0.109	1
07345	Trichloroethene	79-01-6	0.187	0.0200	1.00	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1610230AA	04/11/2016 16:51	Jacob E Bailey	1

Sample Description: 800-4-IA Air
SUMMA# 1179
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307865
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:24 by CF
through 03/23/2016 16:22
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.126	0.0200	0.791	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0354 J	0.0200	0.143 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0480 J	0.0200	0.194 J	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0524	0.0200	0.208	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.262	0.0200	1.04	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.177	0.0200	0.703	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0565	0.0200	0.383	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.318	0.0200	1.74	0.109	1
07345	Trichloroethene	79-01-6	0.194	0.0200	1.05	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	E1610230AA	04/11/2016 17:23	Jacob E Bailey	1

Sample Description: 800-6-SS Air
SUMMA# 1200
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307866
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 07:40 by CF
through 03/23/2016 15:22
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		4.0	N.D.		25	20
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	N.D.		4.0	N.D.		16	20
05298	1,2-Dichloroethane	107-06-2	N.D.		4.0	N.D.		16	20
05298	1,1-Dichloroethene	75-35-4	19	J	4.0	75	J	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		4.0	N.D.		16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		4.0	N.D.		16	20
05298	Tetrachloroethene	127-18-4	100		4.0	680		27	20
05298	1,1,1-Trichloroethane	71-55-6	830		4.0	4,500		22	20
05298	Trichloroethene	79-01-6	370		4.0	2,000		21	20
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 16:50	Jacob E Bailey	20

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Analysis Report

Sample Description: 800-3-SS Air
SUMMA# 522
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307867
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:10 by CF
through 03/23/2016 15:47
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	20	N.D.	130	100
05298	Chloroethane	75-00-3	N.D.	20	N.D.	53	100
05298	1,1-Dichloroethane	75-34-3	N.D.	20	N.D.	81	100
05298	1,2-Dichloroethane	107-06-2	N.D.	20	N.D.	81	100
05298	1,1-Dichloroethene	75-35-4	N.D.	20	N.D.	79	100
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	20	N.D.	79	100
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	20	N.D.	79	100
05298	Tetrachloroethene	127-18-4	120	20	800	140	100
05298	1,1,1-Trichloroethane	71-55-6	2,300	20	12,000	110	100
05298	Trichloroethene	79-01-6	2,500	20	13,000	110	100
05298	Vinyl Chloride	75-01-4	N.D.	20	N.D.	51	100

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 17:40	Jacob E Bailey	100

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Analysis Report

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Sample Description: 800-2-SS Air
SUMMA# 543
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307868
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 09:10 by CF
through 03/23/2016 16:37
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	20	N.D.	130	100
05298	Chloroethane	75-00-3	N.D.	20	N.D.	53	100
05298	1,1-Dichloroethane	75-34-3	N.D.	20	N.D.	81	100
05298	1,2-Dichloroethane	107-06-2	N.D.	20	N.D.	81	100
05298	1,1-Dichloroethene	75-35-4	N.D.	20	N.D.	79	100
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	20	N.D.	79	100
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	20	N.D.	79	100
05298	Tetrachloroethene	127-18-4	N.D.	20	N.D.	140	100
05298	1,1,1-Trichloroethane	71-55-6	1,100	20	6,300	110	100
05298	Trichloroethene	79-01-6	1,300	20	6,900	110	100
05298	Vinyl Chloride	75-01-4	N.D.	20	N.D.	51	100

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 18:30	Jacob E Bailey	100

Sample Description: 800-4-SS Air
SUMMA# 826
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307869
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:24 by CF
through 03/23/2016 16:22
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	20	N.D.	130	100
05298	Chloroethane	75-00-3	N.D.	20	N.D.	53	100
05298	1,1-Dichloroethane	75-34-3	N.D.	20	N.D.	81	100
05298	1,2-Dichloroethane	107-06-2	N.D.	20	N.D.	81	100
05298	1,1-Dichloroethene	75-35-4	N.D.	20	N.D.	79	100
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	20	N.D.	79	100
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	20	N.D.	79	100
05298	Tetrachloroethene	127-18-4	200	20	1,300	140	100
05298	1,1,1-Trichloroethane	71-55-6	1,700	20	9,100	110	100
05298	Trichloroethene	79-01-6	780	20	4,200	110	100
05298	Vinyl Chloride	75-01-4	N.D.	20	N.D.	51	100

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 19:20	Jacob E Bailey	100

Sample Description: 800-5-SS Air
SUMMA# 884
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307870
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:42 by CF
through 03/23/2016 15:56
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		20	N.D.		130	100
05298	Chloroethane	75-00-3	N.D.		20	N.D.		53	100
05298	1,1-Dichloroethane	75-34-3	75	J	20	300	J	81	100
05298	1,2-Dichloroethane	107-06-2	N.D.		20	N.D.		81	100
05298	1,1-Dichloroethene	75-35-4	N.D.		20	N.D.		79	100
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		20	N.D.		79	100
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		20	N.D.		79	100
05298	Tetrachloroethene	127-18-4	20	J	20	140	J	140	100
05298	1,1,1-Trichloroethane	71-55-6	2,100		20	12,000		110	100
05298	Trichloroethene	79-01-6	2,000		20	11,000		110	100
05298	Vinyl Chloride	75-01-4	N.D.		20	N.D.		51	100

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 20:09	Jacob E Bailey	100

Sample Description: 800-1-SS Air
SUMMA# 1126
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307871
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 08:56 by CF
through 03/23/2016 16:32
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		40	N.D.		250	200
05298	Chloroethane	75-00-3	N.D.		40	N.D.		110	200
05298	1,1-Dichloroethane	75-34-3	200	J	40	810	J	160	200
05298	1,2-Dichloroethane	107-06-2	N.D.		40	N.D.		160	200
05298	1,1-Dichloroethene	75-35-4	350		40	1,400		160	200
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		40	N.D.		160	200
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		40	N.D.		160	200
05298	Tetrachloroethene	127-18-4	42	J	40	290	J	270	200
05298	1,1,1-Trichloroethane	71-55-6	5,600		40	31,000		220	200
05298	Trichloroethene	79-01-6	6,400		40	35,000		210	200
05298	Vinyl Chloride	75-01-4	N.D.		40	N.D.		100	200

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 20:54	Jacob E Bailey	200

Sample Description: 800-7-SS Air
SUMMA# 1180
GE-Evandale Bldg 800 Assessment

LL Sample # AQ 8307872
LL Group # 1645083
Account # 08490

Project Name: GE - Evandale

Collected: 03/23/2016 07:26 by CF
through 03/23/2016 15:13
Submitted: 03/29/2016 13:15
Reported: 04/11/2016 22:03

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	4.0	N.D.	25	20
05298	Chloroethane	75-00-3	N.D.	4.0	N.D.	11	20
05298	1,1-Dichloroethane	75-34-3	N.D.	4.0	N.D.	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.	4.0	N.D.	16	20
05298	1,1-Dichloroethene	75-35-4	N.D.	4.0	N.D.	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	4.0	N.D.	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	4.0	N.D.	16	20
05298	Tetrachloroethene	127-18-4	33	4.0	220	27	20
05298	1,1,1-Trichloroethane	71-55-6	400	4.0	2,200	22	20
05298	Trichloroethene	79-01-6	320	4.0	1,700	21	20
05298	Vinyl Chloride	75-01-4	N.D.	4.0	N.D.	10	20

MDL = Method Detection Limit

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	D1609930AA	04/08/2016 21:49	Jacob E Bailey	20

Quality Control Summary

Client Name: O'Brien & Gere, Inc. Group Number: 1645083
Reported: 04/11/2016 22:03

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ppb(v)	ppb(v)
Batch number: D1609930AA	Sample number(s): 8307866-8307872	
Carbon Tetrachloride	N.D.	0.20
Chloroethane	N.D.	0.20
1,1-Dichloroethane	N.D.	0.20
1,2-Dichloroethane	N.D.	0.20
1,1-Dichloroethene	N.D.	0.20
cis-1,2-Dichloroethene	N.D.	0.20
trans-1,2-Dichloroethene	N.D.	0.20
Tetrachloroethene	N.D.	0.20
1,1,1-Trichloroethane	N.D.	0.20
Trichloroethene	N.D.	0.20
Vinyl Chloride	N.D.	0.20
Batch number: E1609930AA	Sample number(s): 8307857-8307862	
Carbon Tetrachloride	N.D.	0.0200
Chloroethane	N.D.	0.0200
1,1-Dichloroethane	N.D.	0.0200
1,2-Dichloroethane	N.D.	0.0200
1,1-Dichloroethene	N.D.	0.0200
cis-1,2-Dichloroethene	N.D.	0.0200
trans-1,2-Dichloroethene	N.D.	0.0200
Tetrachloroethene	N.D.	0.0200
1,1,1-Trichloroethane	N.D.	0.0200
Trichloroethene	N.D.	0.0200
Vinyl Chloride	N.D.	0.0200
Batch number: E1610230AA	Sample number(s): 8307863-8307865	
Carbon Tetrachloride	N.D.	0.0200
Chloroethane	N.D.	0.0200
1,1-Dichloroethane	N.D.	0.0200
1,2-Dichloroethane	N.D.	0.0200
1,1-Dichloroethene	N.D.	0.0200
cis-1,2-Dichloroethene	N.D.	0.0200
trans-1,2-Dichloroethene	N.D.	0.0200
Tetrachloroethene	N.D.	0.0200
1,1,1-Trichloroethane	N.D.	0.0200
Trichloroethene	N.D.	0.0200
Vinyl Chloride	N.D.	0.0200

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: O'Brien & Gere, Inc. Group Number: 1645083
Reported: 04/11/2016 22:03

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1609930AA	Sample number(s): 8307866-8307872								
Carbon Tetrachloride	10	7.75	10	8.01	77	80	70-130	3	25
Chloroethane	10	8.24	10	8.90	82	89	63-119	8	25
1,1-Dichloroethane	10	8.35	10	8.88	83	89	67-124	6	25
1,2-Dichloroethane	10	9.21	10	9.19	92	92	70-130	0	25
1,1-Dichloroethene	10	7.60	10	8.09	76	81	61-128	6	25
cis-1,2-Dichloroethene	10	8.48	10	9.29	85	93	65-121	9	25
trans-1,2-Dichloroethene	10	8.93	10	9.04	89	90	66-121	1	25
Tetrachloroethene	10	8.12	10	8.41	81	84	70-130	3	25
1,1,1-Trichloroethane	10	8.12	10	8.52	81	85	70-130	5	25
Trichloroethene	10	8.62	10	9.17	86	92	70-130	6	25
Vinyl Chloride	10	7.96	10	8.64	80	86	70-130	8	25
Batch number: E1609930AA	Sample number(s): 8307857-8307862								
Carbon Tetrachloride	0.260	0.266	0.260	0.261	102	100	70-130	2	25
Chloroethane	0.243	0.285	0.243	0.264	117	109	70-130	8	25
1,1-Dichloroethane	0.253	0.286	0.253	0.273	113	108	70-130	5	25
1,2-Dichloroethane	0.260	0.286	0.260	0.286	110	110	61-154	0	25
1,1-Dichloroethene	0.250	0.269	0.250	0.264	107	106	70-130	2	25
cis-1,2-Dichloroethene	0.263	0.281	0.263	0.279	107	106	54-118	1	25
trans-1,2-Dichloroethene	0.250	0.288	0.250	0.278	115	111	70-130	3	25
Tetrachloroethene	0.268	0.272	0.268	0.262	102	98	48-130	4	25
1,1,1-Trichloroethane	0.258	0.260	0.258	0.249	101	97	70-130	4	25
Trichloroethene	0.258	0.294	0.258	0.288	114	112	70-130	2	25
Vinyl Chloride	0.253	0.273	0.253	0.279	108	110	64-119	2	25
Batch number: E1610230AA	Sample number(s): 8307863-8307865								
Carbon Tetrachloride	0.260	0.248	0.260	0.253	95	97	70-130	2	25
Chloroethane	0.243	0.258	0.243	0.242	106	99	70-130	7	25
1,1-Dichloroethane	0.253	0.250	0.253	0.255	99	101	70-130	2	25
1,2-Dichloroethane	0.260	0.274	0.260	0.266	105	102	61-154	3	25
1,1-Dichloroethene	0.250	0.230	0.250	0.232	92	93	70-130	1	25
cis-1,2-Dichloroethene	0.263	0.262	0.263	0.258	99	98	54-118	1	25
trans-1,2-Dichloroethene	0.250	0.252	0.250	0.264	101	106	70-130	5	25
Tetrachloroethene	0.268	0.264	0.268	0.261	99	97	48-130	1	25
1,1,1-Trichloroethane	0.258	0.238	0.258	0.254	92	98	70-130	6	25
Trichloroethene	0.258	0.267	0.258	0.267	103	104	70-130	0	25
Vinyl Chloride	0.253	0.235	0.253	0.245	93	97	64-119	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

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Acct. # 8490 Group # 1645083 For Eurofins Lancaster Laboratories Environmental use only Sample # 830785?-72 Bottle Order (SCR) # _____

Client Information

Client: O'Brien & Gere Engineers Account #: 08490

Project Name/#: GE-Evendale Bldg. 800 Assessment

Project Manager: Matt Traister P.O. #: 11600269

Sampler: C. Forman, T. Dalton Quote #: 212172 A

Name of state where samples were collected: OHIO

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? Yes (No) EDD Required? (Yes) No

	Temperature (F) Start	Temperature (F) Stop	Pressure ("Hg) Start	Pressure ("Hg) Stop
Ambient				
Maximum				
Minimum				

Analyses Requested

EPA TO - 15 | ☐ MTBE | ☐ BTEX | EPA 18 | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15	EPA 18	EPA 25	Helium as tracer	O2/CO2	Library Search
800-1-IA	3/23/16 0856	3/23/16 1300	-29.1	-3.8			415282	886	6	10.5	X					
800-AA-1	3/23/16 0920	3/23/16 1653	-29.2	-9.3			301135	1216	6	10.2	X					
800-2-IA	3/23/16 0910	3/23/16 1637	-29.2	-8.3			335290	1336	6	10.4	X					
800-5-IA	3/23/16 0842	3/23/16 1550	-29.1	-9.2			399345	502	6	10.4	X					
800-3-IA	3/23/16 0810	3/23/16 1547	-29.2	-8.1			301113	526	6	10.4	X					
800-AA-2	3/23/16 0932	3/23/16 1658	-29.1	-8.0			304037	842	6	10.6	X					
800-7-IA	3/23/16 0726	3/23/16 1513	-29.2	-7.2			336714	886	6	10.5	X					
800-6-IA	3/23/16 0740	3/23/16 1522	-29.2	-7.6			338067	550	6	10.4	X					
800-4-IA	3/23/16 0824	3/23/16 1622	-29.2	-6.4			336714	1179	6	10.8	X					

Instructions/QC Requirements & Comments

Please report only Chlorinated VOC List.

Please report TCE to MDL.

6 BOXES

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Canisters Shipped by: 14:50	3/17/16	Canisters Received by: OBG	3/21/16				
				Relinquished by: OBG	3/25/16 1200	Received by: Kristen Abel	3/29/16 1315

Summa Canister Field Test Data/Chain of Custody

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Acct. # 8490 Group # 1604508 Sample # 8307857-72 Bottle Order (SCR) # _____

For Eurofins Lancaster Laboratories Environmental use only

Client Information

Client: O'Brien & Gere Engineers Account #: 08490

Project Name/#: GE-Evendale Bldg. 800 Assessment

Project Manager: Matt Traister P.O. #: 11600269

Sampler: C. Forman, T. Dalton Quote #: 212172A

Name of state where samples were collected: OHIO

Turnaround Time Requested (TAT) (circle one)

Standard Rush (specify) _____

Data Package Required? Yes (No)

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient				
Maximum				
Minimum				

Analyses Requested

EPA TO - 15 ☐ MTBE ☐ BTEX EPA 18 EPA 25 (select range below) Helium as tracer O2/CO2 Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure In Field ("Hg) (Start)	Canister Pressure In Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO - 15	EPA 18	EPA 25	Helium as tracer	O2/CO2	Library Search
800-6-SS	3/23/16 0740	3/23/16 1522	-29.2	-5.5			675024	1200	6	10.8	X					
800-3-SS	3/23/16 0810	3/23/16 1547	-29.2	-7.6			415309	522	6	10.4	X					
800-2-SS	3/23/16 0910	3/23/16 1637	-28.8	-9.5			252295	543	6	10.5	X					
800-4-SS	3/23/16 0824	3/23/16 1622	-29.2	-7.1			415305	826	6	10.4	X					
800-5-SS	3/23/16 0842	3/23/16 1556	-29.1	-8.5			301068	884	6	10.7	X					
800-1-SS	3/23/16 0856	3/23/16 1632	-29.2	-8.4			336712	1126	6	10.4	X					
800-7-SS	3/23/16 0720	3/23/16 1513	-29.2	-8.0			301144	1180	6	10.4	X					

Instructions/QC Requirements & Comments

None.

Please report only 11 Chlorinated VOC List

6 BOXES

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature] 14:50	3/17/16	[signature] -OBG	3/21/16 1200				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by: [signature] -OBG	Date/Time: 3/25/16 1200	Received by: [signature]	Date/Time: 3/29/16 13:15

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Sample Administration Receipt Documentation Log

Doc Log ID: 140917

Group Number(s): 1645083

Client: O'Brien & Gere

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	03/29/2016 13:15
Number of Packages:	6	Number of Projects:	1
State/Province of Origin:	OH		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	16
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	No

Unpacked by Krista Abel (3058) at 13:43 on 03/29/2016

General Comments: Rec'd 1 bag of Summa parts.

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

Report Date: October 31, 2016

Project: GE - Evandale

Submittal Date: 10/18/2016
Group Number: 1722292
PO Number: 11600269
State of Sample Origin: OH

Client Sample Description	Lancaster Labs (LL) #
800-6-IA Air	8649137
800-3-IA Air	8649138
800-AA-I Air	8649139
800-5-IA Air	8649140
800-2-IA Air	8649141
800-1-IA Air	8649142
800-7-IA Air	8649143
800-AA-2 Air	8649144
800-4-IA Air	8649145
800-7-SS Air	8649146
800-6-SS Air	8649147
800-4-SS Air	8649148
800-2-SS Air	8649149
800-1-SS Air	8649150
800-3-SS Air	8649151
800-5-SS Air	8649152

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	O'Brien & Gere, Inc.	Attn: Richard L. Boone
Electronic Copy To	O'Brien & Gere, Inc.	Attn: Chase Forman

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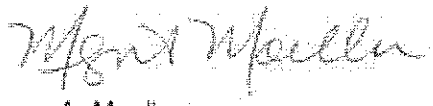
Respectfully Submitted,



Megan A. Moeller
Senior Specialist

(717) 556-7261

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Analysis Report

Sample Description: 800-6-IA Air
SUMMA# 1360
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649137
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 06:43 by CF
through 10/12/2016 12:31
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.114	0.0200	0.716	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.112	0.0200	0.454	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.173	0.0200	0.685	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.112	0.0200	0.445	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.630	0.0200	2.50	0.0793	1
07345	Tetrachloroethene	127-18-4	0.111	0.0200	0.755	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.707	0.0200	3.86	0.109	1
07345	Trichloroethene	79-01-6	0.531	0.0200	2.86	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 15:51	Jacob E Bailey	1

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Analysis Report

Sample Description: 800-3-IA Air
SUMMA# 1406
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649138
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:36 by CF
through 10/12/2016 15:36
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.105	0.0200	0.658	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.121	0.0200	0.490	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.203	0.0200	0.806	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0912	0.0200	0.361	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.184	0.0200	0.728	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0573	0.0200	0.389	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.581	0.0200	3.17	0.109	1
07345	Trichloroethene	79-01-6	0.464	0.0200	2.50	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 16:19	Jacob E Bailey	1

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Analysis Report

Sample Description: 800-AA-I Air
SUMMA# 1420
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649139
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 08:34 by CF
through 10/12/2016 16:05
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.123	0.0200	0.775	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0255 J	0.0200	0.103 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	N.D.	0.0200	N.D.	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.242	0.0200	0.960	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.0388 J	0.0200	0.154 J	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0426 J	0.0200	0.289 J	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.124	0.0200	0.674	0.109	1
07345	Trichloroethene	79-01-6	0.0912	0.0200	0.490	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 16:48	Jacob E Bailey	1

Sample Description: 800-5-IA Air
SUMMA# 504
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649140
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 08:15 by CF
through 10/12/2016 15:46
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.102	0.0200	0.642	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0416 J	0.0200	0.169 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	N.D.	0.0200	N.D.	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.379	0.0200	1.50	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0452 J	0.0200	0.307 J	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.208	0.0200	1.13	0.109	1
07345	Trichloroethene	79-01-6	0.186	0.0200	1.00	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 17:16	Jacob E Bailey	1

Sample Description: 800-2-IA Air
SUMMA# 515
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649141
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:12 by CF
through 10/12/2016 15:06
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.221	0.0200	1.39	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0377 J	0.0200	0.153 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0404 J	0.0200	0.160 J	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0402 J	0.0200	0.159 J	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	1.01	0.200	4.00	0.793	10
07345	Tetrachloroethene	127-18-4	0.0493 J	0.0200	0.335 J	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.287	0.0200	1.56	0.109	1
07345	Trichloroethene	79-01-6	0.174	0.0200	0.935	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 17:43	Jacob E Bailey	1
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1630230AA	10/28/2016 16:20	Jacob E Bailey	10

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Analysis Report

Sample Description: 800-1-IA Air
SUMMA# 508
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649142
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:00 by CF
through 10/12/2016 14:59
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.149	0.0200	0.937	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0604	0.0200	0.245	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0874	0.0200	0.346	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0675	0.0200	0.268	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.437	0.0200	1.73	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0538	0.0200	0.365	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.344	0.0200	1.88	0.109	1
07345	Trichloroethene	79-01-6	0.241	0.0200	1.29	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 18:11	Jacob E Bailey	1

Sample Description: 800-7-IA Air
SUMMA# 1228
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649143
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 06:32 by CF
through 10/12/2016 13:32
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
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Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15 using SIM			ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.101	0.0200	0.638	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0874	0.0200	0.354	0.0809	1
07345	1,2-Dichloroethane	107-06-2	0.0788	0.0200	0.319	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.109	0.0200	0.434	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0775	0.0200	0.307	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.238	0.0200	0.942	0.0793	1
07345	Tetrachloroethene	127-18-4	0.103	0.0200	0.695	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.592	0.0200	3.23	0.109	1
07345	Trichloroethene	79-01-6	0.466	0.0200	2.51	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 18:39	Jacob E Bailey	1

Sample Description: 800-AA-2 Air
SUMMA# 829
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649144
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 08:39 by CF
through 10/12/2016 16:11
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.121	0.0200	0.759	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	N.D.	0.0200	N.D.	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	N.D.	0.0200	N.D.	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0200	N.D.	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0200	N.D.	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0441 J	0.0200	0.299 J	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.113	0.0200	0.614	0.109	1
07345	Trichloroethene	79-01-6	0.0872	0.0200	0.468	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 19:07	Jacob E Bailey	1

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Analysis Report

Sample Description: 800-4-IA Air
SUMMA# 328
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649145
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:26 by CF
through 10/12/2016 15:16
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
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Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15 using SIM**		ppb(v)	ppb(v)	ug/m3	ug/m3	
07345	Carbon Tetrachloride	56-23-5	0.119	0.0200	0.746	0.126	1
07345	Chloroethane	75-00-3	N.D.	0.0200	N.D.	0.0528	1
07345	1,1-Dichloroethane	75-34-3	0.0477 J	0.0200	0.193 J	0.0809	1
07345	1,2-Dichloroethane	107-06-2	N.D.	0.0200	N.D.	0.0809	1
07345	1,1-Dichloroethene	75-35-4	0.0686	0.0200	0.272	0.0793	1
07345	cis-1,2-Dichloroethene	156-59-2	0.0694	0.0200	0.275	0.0793	1
07345	trans-1,2-Dichloroethene	156-60-5	0.386	0.0200	1.53	0.0793	1
07345	Tetrachloroethene	127-18-4	0.0549	0.0200	0.372	0.136	1
07345	1,1,1-Trichloroethane	71-55-6	0.346	0.0200	1.89	0.109	1
07345	Trichloroethene	79-01-6	0.210	0.0200	1.13	0.107	1
07345	Vinyl Chloride	75-01-4	N.D.	0.0200	N.D.	0.0511	1

The GC/MS internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07345	TO-15 by SIM	EPA TO-15 using SIM	1	D1629530AA	10/21/2016 19:34	Jacob E Bailey	1

Sample Description: 800-7-SS Air
SUMMA# 856
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649146
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 06:32 by CF
through 10/12/2016 14:32
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	4.0	N.D.	25	20
05298	Chloroethane	75-00-3	N.D.	4.0	N.D.	11	20
05298	1,1-Dichloroethane	75-34-3	N.D.	4.0	N.D.	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.	4.0	N.D.	16	20
05298	1,1-Dichloroethene	75-35-4	N.D.	4.0	N.D.	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	4.0	N.D.	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	4.0	N.D.	16	20
05298	Tetrachloroethene	127-18-4	41	4.0	270	27	20
05298	1,1,1-Trichloroethane	71-55-6	450	4.0	2,500	22	20
05298	Trichloroethene	79-01-6	300	4.0	1,600	21	20
05298	Vinyl Chloride	75-01-4	N.D.	4.0	N.D.	10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 15:50	Jacob E Bailey	20

Sample Description: 800-6-SS Air
SUMMA# 820
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649147
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 06:43 by CF
through 10/12/2016 14:43
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	4.0	N.D.	25	20
05298	Chloroethane	75-00-3	N.D.	4.0	N.D.	11	20
05298	1,1-Dichloroethane	75-34-3	N.D.	4.0	N.D.	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.	4.0	N.D.	16	20
05298	1,1-Dichloroethene	75-35-4	21	4.0	83	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	4.0	N.D.	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	4.0	N.D.	16	20
05298	Tetrachloroethene	127-18-4	110	4.0	780	27	20
05298	1,1,1-Trichloroethane	71-55-6	790	4.0	4,300	22	20
05298	Trichloroethene	79-01-6	400	4.0	2,100	21	20
05298	Vinyl Chloride	75-01-4	N.D.	4.0	N.D.	10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 16:21	Jacob E Bailey	20

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Analysis Report

Sample Description: 800-4-SS Air
SUMMA# 1038
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649148
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:26 by CF
through 10/12/2016 15:16
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		4.0	N.D.		25	20
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	7.2	J	4.0	29	J	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.		4.0	N.D.		16	20
05298	1,1-Dichloroethene	75-35-4	N.D.		4.0	N.D.		16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.		4.0	N.D.		16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.		4.0	N.D.		16	20
05298	Tetrachloroethene	127-18-4	350		4.0	2,400		27	20
05298	1,1,1-Trichloroethane	71-55-6	2,000		20	11,000		110	100
05298	Trichloroethene	79-01-6	980		4.0	5,200		21	20
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 16:52	Jacob E Bailey	20
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/28/2016 00:10	Jacob E Bailey	100

Sample Description: 800-2-SS Air
SUMMA# 1233
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649149
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:12 by CF
through 10/12/2016 15:06
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	4.0	N.D.	25	20
05298	Chloroethane	75-00-3	N.D.	4.0	N.D.	11	20
05298	1,1-Dichloroethane	75-34-3	N.D.	4.0	N.D.	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.	4.0	N.D.	16	20
05298	1,1-Dichloroethene	75-35-4	6.1 J	4.0	24 J	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	4.0	N.D.	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	4.0	N.D.	16	20
05298	Tetrachloroethene	127-18-4	31	4.0	210	27	20
05298	1,1,1-Trichloroethane	71-55-6	1,600	20	8,600	110	100
05298	Trichloroethene	79-01-6	450	4.0	2,400	21	20
05298	Vinyl Chloride	75-01-4	N.D.	4.0	N.D.	10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 17:17	Jacob E Bailey	20
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/28/2016 00:42	Jacob E Bailey	100

Sample Description: 800-1-SS Air
SUMMA# 896
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649150
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:00 by CF
through 10/12/2016 14:59
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air EPA TO-15			ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		4.0	N.D.		25	20
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	340		4.0	1,400		16	20
05298	1,2-Dichloroethane	107-06-2	N.D.		4.0	N.D.		16	20
05298	1,1-Dichloroethene	75-35-4	660		4.0	2,600		16	20
05298	cis-1,2-Dichloroethene	156-59-2	36		4.0	140		16	20
05298	trans-1,2-Dichloroethene	156-60-5	13	J	4.0	50	J	16	20
05298	Tetrachloroethene	127-18-4	85		4.0	580		27	20
05298	1,1,1-Trichloroethane	71-55-6	7,500		40	41,000		220	200
05298	Trichloroethene	79-01-6	7,200		40	39,000		210	200
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 17:42	Jacob E Bailey	20
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/28/2016 01:10	Jacob E Bailey	200

Sample Description: 800-3-SS Air
SUMMA# 848
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649151
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 07:36 by CF
through 10/12/2016 15:36
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

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CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air EPA TO-15			ppb(v)	ppb(v)	ug/m3	ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.	4.0	N.D.	25	20
05298	Chloroethane	75-00-3	N.D.	4.0	N.D.	11	20
05298	1,1-Dichloroethane	75-34-3	9.9 J	4.0	40 J	16	20
05298	1,2-Dichloroethane	107-06-2	N.D.	4.0	N.D.	16	20
05298	1,1-Dichloroethene	75-35-4	N.D.	4.0	N.D.	16	20
05298	cis-1,2-Dichloroethene	156-59-2	N.D.	4.0	N.D.	16	20
05298	trans-1,2-Dichloroethene	156-60-5	N.D.	4.0	N.D.	16	20
05298	Tetrachloroethene	127-18-4	270	4.0	1,800	27	20
05298	1,1,1-Trichloroethane	71-55-6	2,800	20	15,000	110	100
05298	Trichloroethene	79-01-6	2,600	20	14,000	110	100
05298	Vinyl Chloride	75-01-4	N.D.	4.0	N.D.	10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 18:06	Jacob E Bailey	20
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/28/2016 01:42	Jacob E Bailey	100

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Analysis Report

Sample Description: 800-5-SS Air
SUMMA# 880
Building 800 Soil Vapor Event#2

LL Sample # AQ 8649152
LL Group # 1722292
Account # 08490

Project Name: GE - Evandale

Collected: 10/12/2016 08:15 by CF
through 10/12/2016 14:15
Submitted: 10/18/2016 15:10
Reported: 10/31/2016 13:34

O'Brien & Gere, Inc.
P.O. Box 4873
Syracuse NY 13221-4873

CAT No.	Analysis Name	CAS Number	Final Result		MDL	Final Result		MDL	DF
Volatiles in Air	**EPA TO-15**		ppb(v)		ppb(v)	ug/m3		ug/m3	
05298	Carbon Tetrachloride	56-23-5	N.D.		4.0	N.D.		25	20
05298	Chloroethane	75-00-3	N.D.		4.0	N.D.		11	20
05298	1,1-Dichloroethane	75-34-3	130		4.0	530		16	20
05298	1,2-Dichloroethane	107-06-2	N.D.		4.0	N.D.		16	20
05298	1,1-Dichloroethene	75-35-4	9.4	J	4.0	37	J	16	20
05298	cis-1,2-Dichloroethene	156-59-2	28		4.0	110		16	20
05298	trans-1,2-Dichloroethene	156-60-5	5.6	J	4.0	22	J	16	20
05298	Tetrachloroethene	127-18-4	38		4.0	260		27	20
05298	1,1,1-Trichloroethane	71-55-6	2,700		20	15,000		110	100
05298	Trichloroethene	79-01-6	2,100		20	11,000		110	100
05298	Vinyl Chloride	75-01-4	N.D.		4.0	N.D.		10	20

MDL = Method Detection Limit

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/27/2016 18:31	Jacob E Bailey	20
05298	TO 15 VOA Ext. List	EPA TO-15	1	E1630130AA	10/28/2016 02:14	Jacob E Bailey	100

Quality Control Summary

Client Name: O'Brien & Gere, Inc. Group Number: 1722292
Reported: 10/31/2016 13:34

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ppb(v)	MDL ppb(v)	Result ug/m3	MDL ug/m3
Batch number: D1629530AA	Sample number(s): 8649137-8649145			
Carbon Tetrachloride	N.D.	0.0200	N.D.	0.126
Chloroethane	N.D.	0.0200	N.D.	0.0528
1,1-Dichloroethane	N.D.	0.0200	N.D.	0.0809
1,2-Dichloroethane	N.D.	0.0200	N.D.	0.0809
1,1-Dichloroethene	N.D.	0.0200	N.D.	0.0793
cis-1,2-Dichloroethene	N.D.	0.0200	N.D.	0.0793
trans-1,2-Dichloroethene	N.D.	0.0200	N.D.	0.0793
Tetrachloroethene	N.D.	0.0200	N.D.	0.136
1,1,1-Trichloroethane	N.D.	0.0200	N.D.	0.109
Trichloroethene	N.D.	0.0200	N.D.	0.107
Vinyl Chloride	N.D.	0.0200	N.D.	0.0511
Batch number: D1630230AA	Sample number(s): 8649141			
trans-1,2-Dichloroethene	N.D.	0.0200	N.D.	0.0793
Batch number: E1630130AA	Sample number(s): 8649146-8649152			
Carbon Tetrachloride	N.D.	0.20	N.D.	1.3
Chloroethane	N.D.	0.20	N.D.	0.53
1,1-Dichloroethane	N.D.	0.20	N.D.	0.81
1,2-Dichloroethane	N.D.	0.20	N.D.	0.81
1,1-Dichloroethene	N.D.	0.20	N.D.	0.79
cis-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
trans-1,2-Dichloroethene	N.D.	0.20	N.D.	0.79
Tetrachloroethene	N.D.	0.20	N.D.	1.4
1,1,1-Trichloroethane	N.D.	0.20	N.D.	1.1
Trichloroethene	N.D.	0.20	N.D.	1.1
Vinyl Chloride	N.D.	0.20	N.D.	0.51

LCS/LCSD

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1629530AA	Sample number(s): 8649137-8649145								
Carbon Tetrachloride	0.500	0.491	0.500	0.490	98	98	70-130	0	25
Chloroethane	0.500	0.449	0.500	0.401	90	80	70-130	11	25
1,1-Dichloroethane	0.500	0.492	0.500	0.494	98	99	70-130	0	25
1,2-Dichloroethane	0.500	0.518	0.500	0.499	104	100	61-154	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: O'Brien & Gere, Inc. Group Number: 1722292
Reported: 10/31/2016 13:34

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ppb(v)	LCS Conc ppb(v)	LCSD Spike Added ppb(v)	LCSD Conc ppb(v)	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethene	0.500	0.498	0.500	0.478	100	96	70-130	4	25
cis-1,2-Dichloroethene	0.500	0.418	0.500	0.430	84	86	54-118	3	25
trans-1,2-Dichloroethene	0.500	0.473	0.500	0.468	95	94	70-130	1	25
Tetrachloroethene	0.500	0.539	0.500	0.528	108	106	48-130	2	25
1,1,1-Trichloroethane	0.500	0.477	0.500	0.474	95	95	70-130	1	25
Trichloroethene	0.500	0.511	0.500	0.484	102	97	70-130	6	25
Vinyl Chloride	0.500	0.479	0.500	0.471	96	94	64-119	2	25
Batch number: D1630230AA	Sample number(s): 8649141								
trans-1,2-Dichloroethene	0.500	0.548	0.500	0.537	110	107	70-130	2	25
Batch number: E1630130AA	Sample number(s): 8649146-8649152								
Carbon Tetrachloride	10	9.84	10	10.35	98	104	70-130	5	25
Chloroethane	10	10.11	10	10.35	101	104	63-119	2	25
1,1-Dichloroethane	10	9.71	10	10.06	97	101	67-124	4	25
1,2-Dichloroethane	10	10.31	10	10.44	103	104	70-130	1	25
1,1-Dichloroethene	10	9.61	10	10.14	96	101	61-128	5	25
cis-1,2-Dichloroethene	10	9.22	10	9.55	92	96	65-121	4	25
trans-1,2-Dichloroethene	10	9.56	10	9.94	96	99	66-121	4	25
Tetrachloroethene	10	9.82	10	9.92	98	99	70-130	1	25
1,1,1-Trichloroethane	10	9.31	10	9.84	93	98	70-130	6	25
Trichloroethene	10	9.33	10	9.58	93	96	70-130	3	25
Vinyl Chloride	10	9.72	10	10.1	97	101	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 08490 Group # 172929 For Eurofins Lancaster Laboratories Environmental use only Sample # 08437-52 Bottle Order (SCR) # 195396

Client Information

Client: O'Brien & Gere
Account #: 08490
Project Name/#: GE-Evendale - Building 800 Soil Vapor Event #2
Project Manager: Matt Traister
P.O. #: 1160026 9
Sampler: C. Forman, T. DeHaan
Quote #: 212172A
Name of state where samples were collected: Ohio

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient	55°F	72°F		
Maximum				
Minimum				

Analyses Requested

EPA TO-15 (chlorinated list) | EPA 18 | ☐ MTBE | ☐ BTEX | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15 (chlorinated list)	EPA 18	MTBE	BTEX	EPA 25 (select range below)	Helium as tracer	O2/CO2	Library Search
✓ 800-6-IA	10/12/16 0913	10/12/16 1231	-29.0	-1.6	70	70	248253	1360	6	10.3	X							
✓ 800-3-IA	10/12/16 1430	10/12/16 1530	-28.2	-2.3	↓	↓	966403	1406	6	10.5	X							
✓ 800-AA-1	10/12/16 0839	10/12/16 1605	-28.7	-11.0			930842	1420	6	10.4	X							
✓ 800-5 ~~DUP~~ IA	10/12/16 0815	10/12/16 1546	-28.3	-4.8			950034	504	6	10.5	X							
✓ 800-2-IA	10/12/16 0712	10/12/16 1506	-29.2	-4.6			958115	515	6	10.4	X							
~~[illegible]~~			~~-29.6~~				~~710556~~	~~1229~~	6	~~10.4~~	X (cf)							
✓ 800-1-IA	10/12/16 0900	10/12/16 1459	-29.3	-3.9	70	70	249435	508	6	10.4	X							
✓ 800-7-IA	10/12/16 0832	10/12/16 1339	-28.6	~~-4.5~~ -2.0			848497	1228	6	10.4	X							
✓ 800-AA-2	10/12/16 0859	10/12/16 1611	-29.5	-4.5			415276	829	6	10.6	X							
✓ 800-4-IA	10/12/16 0926	10/12/16 1516	-29.6	-4.0			239314	328	6	10.6	X							
✓ 800-7-SS	10/12/16 0832	10/12/16 1432	-29.5	-12.9	↓	↓	316450	856	6	10.4	X							

Instructions/QC Requirements & Comments

Please analyze chlorinated VOC list only

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
14:00	10/5/16	OBC	10/7/16/14:00				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by: OBC Fed-ex	Date/Time: 10/14/16	Received by: 1000	Date/Time: 10-18-16

Summa Canister Field Test Data/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 08490 Group # _____ For Eurofins Lancaster Laboratories Environmental use only Sample # _____ Bottle Order (SCR) # _____

Client Information

Client: O'Brien & Gere | Account #: 08490

Project Name/#: GE-Ewendale - Building 800 Soil Vapor Event #2

Project Manager: Matt Traister | P.O. #: 1160069

Sampler: C. Forman, T. Dalton | Quote #: 212172A

Name of state where samples were collected: Ohio

Turnaround Time Requested (TAT) (circle one)

(Standard) Rush (specify) _____

Data Package Required? (Yes) No

EDD Required? (Yes) No

	Temperature (F) Start	Temperature (F) Stop	Pressure ("Hg) Start	Pressure ("Hg) Stop
Ambient	51°F	72°F		
Maximum				
Minimum				

Analyses Requested

EPA TO-15 (calibrated list) | ☐ MTBE | ☐ BTEX | EPA 18 | EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	Start Date/Time (24-hour clock)	Stop Date/Time (24-hour clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Can Size (L)	Controller Flowrate (mL/min)	EPA TO-15	MTBE	BTEX	EPA 18	EPA 25	Helium as tracer	O2/CO2	Library Search
✓800-6-SS	10/12/16 0913	10/12/16 1445	-29.5	-11.2	70	70	848496	820	6	10.4	X							
✓ 800-4-SS	10/12/16 726	10/12/16 1510	-29.6	-7.1			958118	1038	6	10.2	X							
✓ 800-2-SS	10/12/16 712	10/12/16 1500	-29.5	-4.9			958069	1233	6	10.4	X							
✓ 800-1-SS	10/12/16 0726	10/12/16 1459	-29.6	-9.0			710628	596	6	10.2	X							
✓800-3-SS	10/12/16 736	10/12/16 1536	-29.5	-5.2			824840	848	6	10.3	X							
✓ 800-5-SS	10/12/16 815	10/12/16 1415	-29.6	-2.3	↓	↓	640487	880	6	10.0	X							

Instructions/QC Requirements & Comments

Please analyze chlorinated VOC list only

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
	10/5/16		10/7/16 1000				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:
					10/14/16 1000		10-16-16

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Sample Administration Receipt Documentation Log

Doc Log ID: 165548

Group Number(s): 1722297

Client: O' Brien & Gere

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/18/2016 15:10
Number of Packages:	6	Number of Projects:	1
State/Province of Origin:	OH		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	VOA Vial Headspace ≥ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	Yes
Missing Samples:	No	Air Quality Flow Controllers Present:	Yes
Extra Samples:	No	Flow Controller Quantity:	17
Discrepancy in Container Qty on COC:	No	Air Quality Returns:	Yes
		Summa Canisters:	1224

Unpacked by Melvin Sanchez (8943) at 15:36 on 10/18/2016

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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